

# **Exhibit 19**

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SAMSUNG ELECTRONICS CO. LTD., SAMSUNG ELECTRONICS  
AMERICA, INC., AND APPLE INC.,  
Petitioner,

v.

NEONODE SMARTPHONE LLC,  
Patent Owner

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Case IPR2021-00144  
Patent 8,095,879

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**PATENT OWNER'S DEMONSTRATIVE EXHIBITS  
(EXHIBIT 2046)**

# Samsung, Apple v. Neonode

IPR2021-00144  
U.S. Patent No. 8,095,879

**Neonode Smartphone LLC**  
**September 6, 2022**

Nathan Lowenstein  
Kenneth Weatherwax  
Parham Hendifar  
Lowenstein & Weatherwax LLP

# The Petition Is Limited To Grounds 2A-2D

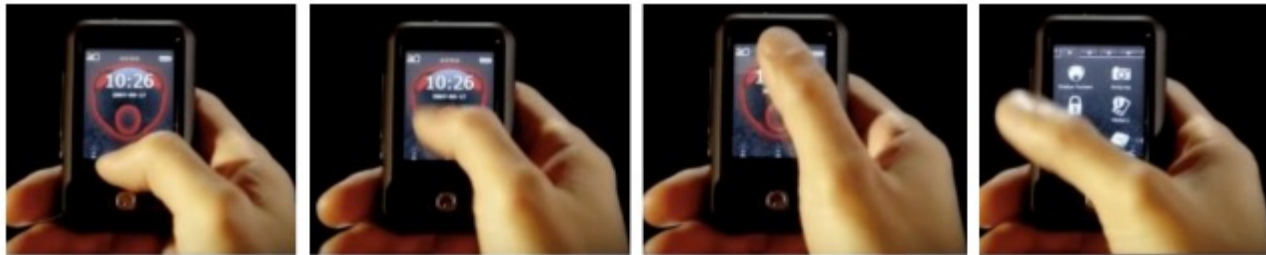
Ground	Claims	Basis (§103)
1A	1, 14-17	Ren, Tanaka
1B	2, 3, 4, 5	Ren, Tanaka, Hirayama307
1C	3	Ren, Tanaka, Hirayama307, Hirayama878
1D	6, 13	Ren, Tanaka, Allard
1E	12	Ren, Tanaka, Henckel
2A	1, 2, 4, 5, 14-17	Hirayama307, Ren
2B	3	Hirayama307, Ren, Hirayama878
2C	6, 13	Hirayama307, Ren, Allard
2D	12	Hirayama307, Henckel
3	1, 14, 15	Jermyn



# Table Of Contents

1. **Secondary Indicia**
2. “gliding ... away” (All Claims)
3. “the representation of the function is not relocated or duplicated during the gliding” (All Claims)
4. “applications and files” (Claim 6)
5. “a shell upon an operating system” (Claim 15)

# Neonode Phone Introduced In 2002, Years Before Apple's iPhone (2007) And Samsung's Galaxy (2009)



Ex. 2008 [N2-Advertisement-Video] (00:26-00:27)

## Core Feature Was Swipe-Based User Interface

# Applicant: “Swipes” Correspond To The Claimed “Gliding ... Away” As Shown In N2 Video

## Interview agenda

For the interview, I would like to discuss the attached draft proposed amendment. Specifically, I would like to discuss the touch-and-glide thumb movement, variously referred to as “swiping”, “rubbing”, “gliding” and “sliding”. This movement is described in claim 1 as “an object touching a location in the touch sensitive area at which the representation of the function is displayed and then gliding along the touch sensitive area away from the location.”

Ex. 1003 [Prosecution History] 357

## RESPONSE TO NON-FINAL OFFICE ACTION

significant portion of the small screen during a navigation operation. For a demonstration of a number of features disclosed in the current patent application and covered by the claims therein and in the present Response, the Examiner is encouraged to access <http://www.neonode.com/en-us/on-stage/products/n2/introduction/> and watch the video demonstration of the N2 mobile phone/personal digital assistant device made by Neonode AB. The N2 device and its

Ex. 2035 [2008-03-14 Office-Action-Response] 15-16

## Neonode's N1 Phone (2002) Was The First Swipe-Based Smartphone—Years Before iPhone (2007) And Galaxy (2009)



Ex. 2020 [Hollatz-Dissertation] 8,



**Figure 3.** The Neonode N1 was the first mobile to use swipe gestures [46]



Figure 11: The first smartphone to support touch gestures:



Ex. 2018 [PhD-Dissertation] 9



Ex. 2013 [Pen-Computing-Magazine-N2-Review] 1

“And **if the iPhone’s swipes and taps seem futuristic, they are not.** Neonode has been using them since the first N1 came out. In fact, **the company’s Neno user interface is based entirely on swipes** and taps. **[I]t must be vexing to see Apple essentially claim ownership of concepts the Neonode phone has been using for at least five years”**

# Users Compared Neonode's "Original" "Sweeping Touch Screen" With iPhone "Copycat"



# Neonode Phones' Swiping Interface Received Effusive Praise



Ex. 2012 [Pen-Computing-Magazine-N1-Review] 2-3

“**swipe, swipe, swipe** ... If this sounds like the dreaded “gestures” that never really caught on in pen computing, it’s not. **The swipes are much simpler.** ... Neonode’s **swiping interface is [] simple and brilliant**”



Ex. 2014 [Trend-Hunter-Article] 1

“designed for **advanced simplicity.** **You do everything on screen, simply and conveniently, with just one finger.**”



Ex. 2021 [iPhone-Killer] 2

“**the strongest contender for the title of ‘iPhone killer,’** ... the screen reacts to **the intuitive passage of a finger** over the screen to initiate basic phone ...”



Ex. 2012 [Pen-Computing-Magazine-N1-Review] 5

“The Neonode phone is **quite obviously unique,** ... The **user interface is compelling** .... **The speed is simply amazing. That’s the way a phone should operate.**”

HOME ▶ tNKGRL MEDIA

tNkgRl Media

Exs. 2016 [tnkgRl-Media-post] 1

“definitely a best kept secret device–Neonode’s touch-based **user interface with gesture recognition ... is extremely intuitive** ...”



# Neonode Phones' Swiping Interface Received Effusive Praise



**Tom Goedkoop** 13 years ago

well, it's just a good phone, the sweeping works great, and the connection with the network is good (sorry for my english, it's not my best class:P)



**Rayen Marzougui** 4 years ago

im in 2017 and i love this phone



**Michael Angelo** 10 years ago

Neonode adapt their fast & responsive touchscreen on this phone, of which this company is famous for.



**athanasiothegr8** 10 years ago

My favorite phone. It has the fastest touchscreen and the most beautiful touch and an easy UI but the battery is weak and it has huge SAR.



**NEOTIMELESS** 3 years ago

I am still using it :) works perfect



**spaided** 12 years ago

I have this phone and its GREAT!!! Not a single problem at all!!



**Stormwolf420** 10 years ago

I own this phone, it turns a lot of heads, and it's an EXCELLENT phone, too, the swiping is more intuitive than I thought, and once one gets the hang of it, this is the best touch screen ever. I had to import mine from Malaysia, and was slapped with a HUGE import fee, but hell, for a phone as unique looking and as good as this one, it was worth every penny!

# Petitioner Samsung Itself Praised And Licensed The Application From Which '879 Patent Issued

**“the future of  
mobile phones.  
We need this.”**





# '879 Application Was One Of Only Two Licensed Applications, And Specifically Called Out In The Agreement

The [Neonode] mobile handsets are based on the light beam controlled touch-screen, "zForce", **and software for interaction with the operating system of the device, "Neno"**. Neonode is in possession of technology, - including zForce **and Neno** – intellectual property rights and know-how for development of mobile handsets (the "'Neonode IPR")

Ex. 2028 [Samsung-Agreement] 2

## LICENSE

Neno; USA patent application, (Application no 10/315,250; Title: "User Interface", application filed December 10, 2002).

## US 8,095,879 B2

(21) Appl. No.: 10/315,250

(22) Filed: Dec. 10, 2002

# Neonode Phones Practiced The Claimed Inventions

## EXHIBIT 2023 DECLARATION OF JOSEPH SHAIN

4. I am personally familiar with the operation of the user interface of the Neonode N1 and N2 phones, having used the phones many times.

5. The Neonode N1 and N2 phones were mobile handheld devices that included a memory, a processor and a touch-sensitive display. The memory stored code that, when executed by the processor of the phone, presented a user interface on the touch-sensitive display.

6. Both the Neonode N1 and N2 presented three icons in a strip along the lower edge of the display immediately following unlocking of the phone. One of the icons represented the Start Menu, one represented the Keyboard Menu, and the third represented the Tools Menu. Each of the icons consisted of only one option for activating the associated function. Each of the icons were activatable by a gesture in which a thumb or finger touches the icon, and swipes up toward the center of the screen before lifting off of the screen. None of the icons were relocated or duplicated during the swiping gesture.

## Patent No.: US 8,095,879 B2

1. A non-transitory computer readable medium storing a computer program with computer program code, which, when read by a mobile handheld computer unit, allows the computer to present a user interface for the mobile handheld computer unit, the user interface comprising:

a touch sensitive area in which a representation of a function is provided, wherein the representation consists of only one option for activating the function and wherein the function is activated by a multi-step operation comprising (i) an object touching the touch sensitive area at a location where the representation is provided and then (ii) the object gliding along the touch sensitive area away from the touched location, wherein the representation of the function is not relocated or duplicated during the gliding.

Ex. 2023 [Shain-Decl.] ¶¶4-6

# Dr. Rosenberg: Neonode Phones Practice The Claimed Invention



## SECOND DECLARATION OF CRAIG ROSENBERG, PH.D.

40. From my review of Neonode's promotional video and other materials, the "swipe" gesture of Neonode's user interfaces in the N1 and N2 phones is covered by claim 1. The claimed inventions concern a user interface for a mobile handheld computer unit that includes a touch sensitive area that includes a representation of a function wherein the representation consists of only one option for activating the function wherein an object (*e.g.*, a finger) touches the touch sensitive area where the representation is provided and then the "object," the finger in our example, "*glid[es] along the touch sensitive area away* from the touched location, wherein the representation of the function is not relocated or duplicated *during the gliding.*" I

# Petitioner: Arrows Are “Relocated Or Duplicated” During Gliding

## PETITIONERS’ REPLY



EX2013, 2; EX1057, 151:20-152:14, 153:2-13. The limitation that the

“representation of the function is not relocated or duplicated during the gliding” is

not met because these arrows duplicate during the gliding motion. The N1/N2

# Neonode Phones' "Representation Of Function" Were Printed Icons That Were Not "Relocated Or Duplicated" During Gliding

"the Neonode N1 and N2 presented **three icons in a strip along the lower edge** ... **None of the icons were relocated or duplicated** during the swiping gesture."

Ex. 2023 [Shain-Decl.] ¶16



Q. And on the N2 on right-hand side, there's also three icons in a strip printed onto the device of the screen?

A. Yes.

Q. Okay. Do those icons function the same way between the N1 and N2?

A. Yes.

Ex. 1057 [Goertz] 151:20-152:7

Three icons that are not relocated or duplicated



# Petitioner Does Not Show Why Printed Icons Cannot Meet The Claims' "A Representation Of A Function Is Provided"

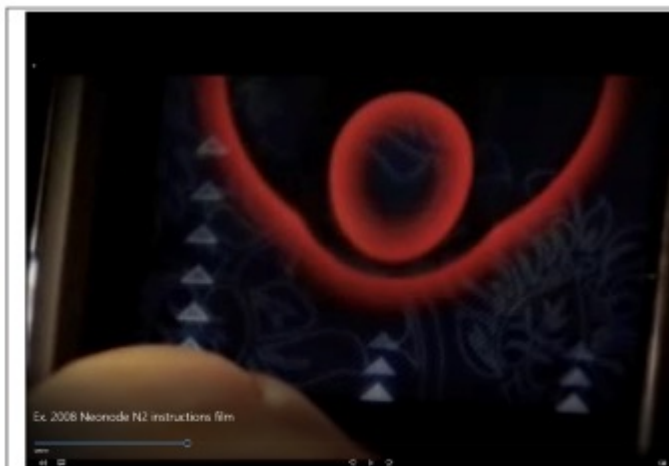
**Patent No.: US 8,095,879 B2**

1. A non-transitory computer readable medium storing a computer program with computer program code, which, when read by a mobile handheld computer unit, allows the computer to present a user interface for the mobile handheld computer unit, the user interface comprising:

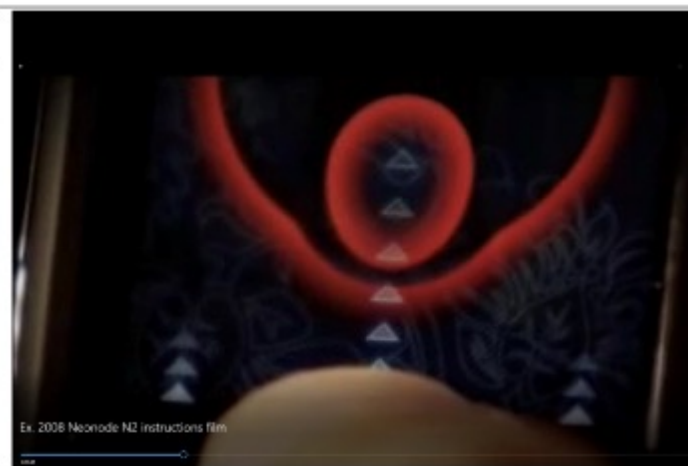
a touch sensitive area in which a representation of a function is provided, wherein the representation consists of only one option for activating the function and wherein the function is activated by a multi-step operation comprising (i) an object touching the touch sensitive area at a location where the representation is provided and then (ii) the object gliding along the touch sensitive area away from the touched location, wherein the representation of the function is not relocated or duplicated during the gliding.



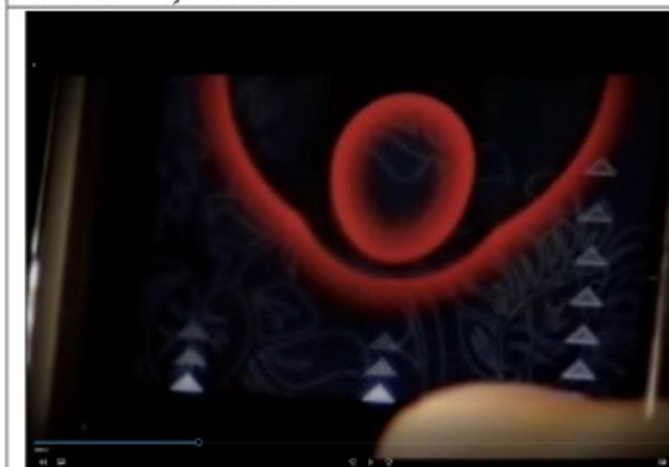
# Arrows Were Not “Relocated Or Duplicated” During Gliding, But Upon Touch And Before Glide To Show Possible Pathways



Ex. 2008, 0:00:40

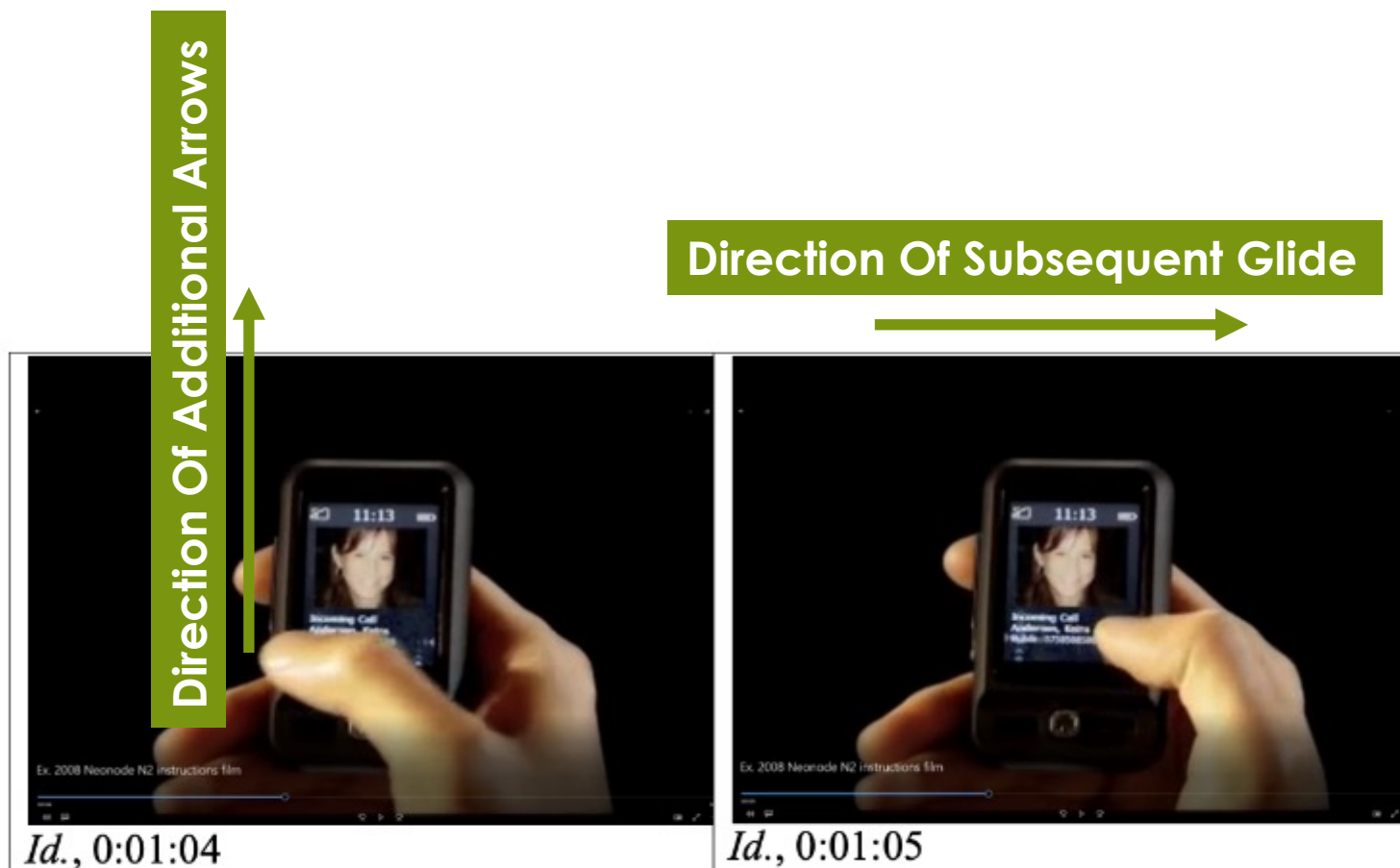


*Id.*, 0:00:41



*Id.*, 0:00:43

# Additional Arrows Can Be Perpendicular To The Direction Of The Subsequent Glide





# Table Of Contents

1. Secondary **Indicia**
2. **“gliding ... away”** (All Claims)
3. “the representation of the function is not relocated or duplicated during the gliding” (All Claims)
4. “applications and files” (Claim 6)
5. “a shell upon an operating system” (Claim 15)

# Petitioner Fails Prove “Gliding ... Away”

**Patent No.: US 8,095,879 B2**

1. A non-transitory computer readable medium storing a computer program with computer program code, which, when read by a mobile handheld computer unit, allows the computer to present a user interface for the mobile handheld computer unit, the user interface comprising:

a touch sensitive area in which a representation of a function is provided, wherein the representation consists of only one option for activating the function and wherein the function is activated by a multi-step operation comprising (i) an object touching the touch sensitive area at a location where the representation is provided and then (ii) the object gliding along the touch sensitive area away from the touched location, wherein the representation of the function is not relocated or duplicated during the gliding.

# Petitioner Relies On Hirayama-307's "Mov[ing] (*i.e.* drag[ging])" The Pen For "Gliding ... Away"

## PETITION

*[1c]*

Hirayama307 discloses "the user touches an icon 41 on which a picture of a telephone is drawn...with the point of the pen 3." EX1006, 4:61-65; EX1002, ¶156. Hirayama307 further discloses "[t]hen, if the user moves (*i.e.* drags) the point of the pen 3 to the display position on the surface of the input tablet 2 without being separated therefrom after having touched the desired icon 41 with the point of the pen 3, and takes the point of the pen 3 off from the surface of the input tablet 2, an icon (hereinafter be referred to as a window) enlarged in the form of the processing display mode of the desired icon 41 is automatically displayed on the display portion 1 as shown in FIG. 3B." EX1006, 5:3-12, FIGS. 3A-3B. EX1002, ¶156.

Pet., 58

# Hirayama-307 Confirms 14 Times That Its Movement/Operation Is A “Drag,” Not A “Glide”

## Hirayama et al.

various functions with a point of the pen and drags the pen along the surface of the display portion to a display

Abstract

More specifically, it is an object of the present invention to provide a data processing apparatus in which the user can activate or deactivate a designated function by the user when the user drags a pen.

It is another object of the present invention to provide a data processing apparatus in which a starting or ending position of a dragging operation can be designated in natural fashion.

1 as shown by an arrow B in FIG. 3B, the user moves the point of the pen 3 in the arrow B direction and drags the pen 3 to the position shown by the broken line, then

above, the user can activate or deactivate the designated function only by dragging the pen 3. Further,

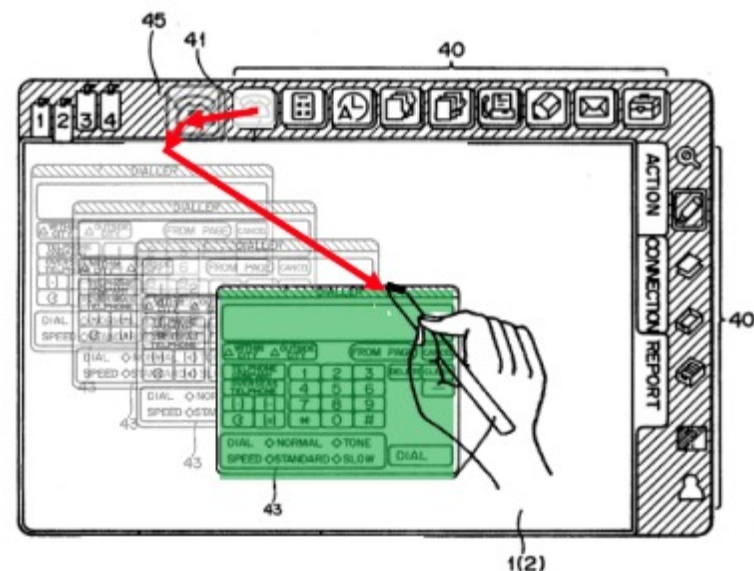
some operation can be removed, and the starting and ending of the dragging operation of the pen 3 can be carried out very clearly. Furthermore, the present in-

1:52-59

6:10-13

7:8-10

7:22-24



# Hirayama-307's Conventional Drag-And-Drop Drags An Icon And Drops The Enlarged Icon At The Desired Location

## SECOND DECLARATION OF CRAIG ROSENBERG, PH.D.

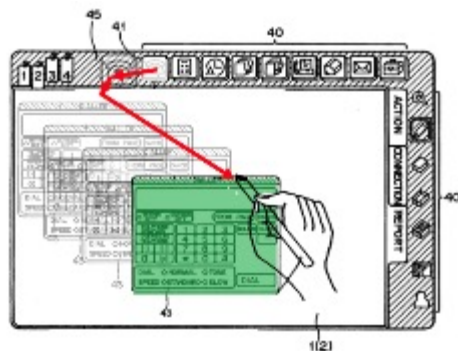
59. Hirayama-307's operation is a "conventional" drag-and-drop

"operation" referenced by the Applicant during prosecution. Specifically, when the user wishes to use Hirayama-307's dialing application, he/she moves the stylus to the application icon 41. Ex. 1006 [Hirayama-307] 2:1-4; 5:30-32. The user then drags the icon outside of the hatched area, into the non-hatched area. *Id.*, 2:5-8;

5:39-53. As the icon 41 is dragged outside of the hatched area, it is "enlarged as a window 43." *Id.*, 2:8-13; 5:59-66. The enlarged window 43 is then placed (*i.e.*,

dropped) at the location within the non-hatched area where the user lifts the stylus.

*Id.*, 2:8-13; 5:59-66.<sup>1</sup> I have visually demonstrated Hirayama'307's drag-and-drop





# Dragging And Gliding Are Distinct



## Petitioner: No Construction Of “Gliding ... Away”



# Petitioner's Expert: No "Analysis" Of "Possible Difference" In Meaning Between "Gliding" And "Dragging"

DEPOSITION OF DR. BENJAMIN B. BEDERSON

10                   **Q. What is the difference between the**  
11                   **plain meaning of gliding a pen as opposed to**  
12                   **dragging a pen?**

13                   MS. MILLER: Objection; form.

14                   THE WITNESS: I don't recall  
15                   performing an analysis distinguishing between any  
16                   possible difference in the meanings of the terms  
17                   "gliding" and "dragging" in my reports. What I





# Reply: Dragging Discloses Gliding Because They Are Both Movements

## PETITIONERS' REPLY

Accordingly, regardless of whether Hirayama-307's icon 41 is dragged with the pen (it is not), **the pen still moves away** from the originally touched location and discloses the claimed multi-step operation. EX1051, ¶23.

Reply, 3

function on the **display area 3**. Hirayama-307 similarly describes: the user touches the pen down on an icon in the **hatched menu area**, **moves the pen** to the **display area** (outside the hatched area), in response to which a processing window

Reply, 19

# Prosecution History: Claims Were Changed From “moving ... from ... to” To “gliding ... away”

## Original Pending Claim 1:

“... each of said first, second, and third functions simultaneously represented in said menu area being activated by the single step of a blunt object moving in a direction **from** a starting point that is the representation of the corresponding one of said first, second, and third functions in said menu area **to** said display area ...”

Ex. 1003 [Prosecution History] 326

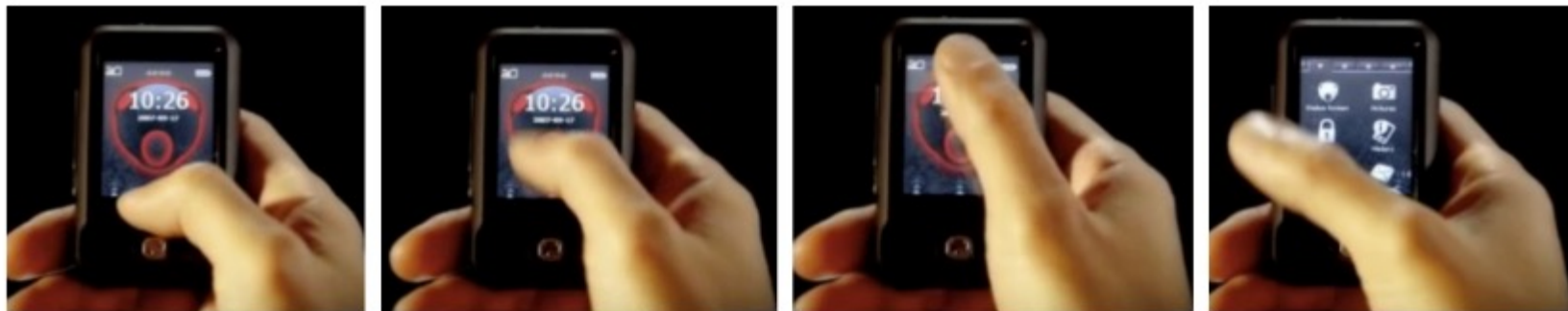
# Applicant “Encouraged” Examiner To Watch N2 Video Demonstration Prior To Reviewing Applicant’s Arguments

## RESPONSE TO NON-FINAL OFFICE ACTION

significant portion of the small screen during a navigation operation. For a demonstration of a number of features disclosed in the current patent application and covered by the claims therein and in the present Response, the Examiner is encouraged to access <http://www.neonode.com/en-us/on-stage/products/n2/introduction/> and watch the video demonstration of the N2 mobile phone/personal digital assistant device made by Neonode AB. The N2 device and its

disclosed in the current application. Applicant encourages the Examiner to view the demonstration video at the above-identified URL prior to reviewing Applicant’s arguments

Ex. 2035 [2008-03-14 Office-Action-Response] 15-16



Ex. 2008 [N2-Advertisement-Video] (00:26-00:27)

# Examiner “can now see the difference between prior art of record and present invention” “in light of the video demonstration”

## *Response to Arguments*

The Examiner reviewed the demonstration as encouraged by the Applicant. In light of the video demonstration, the Examiner can now see the difference between the prior art of record and the present application. With that being said the Examiner feels that the limitations, as claimed, were reasonably interpreted and the current limitations are still too broad to suggest without research what was shown in the video

Ex. 2045 [Final-Office-Action] 16

# After Examiner Interview, Applicant Changed “moving ... from ... to” To “gliding ... away” To “properly claim the ... invention”

## RESPONSE TO OFFICE ACTION

Applicant has withdrawn claims **19 – 47**, and amended claims **1 – 15** to properly claim the present invention. No new matter

each function of said ~~first, second, and third functions simultaneously represented in said menu area~~ plurality of functions being mapped to a corresponding location in the touch sensitive area at which the representation of the function is displayed, and being activated by the single step of a blunt an object touching the corresponding location and then gliding along the touch sensitive area away from the location ~~moving in a direction from a starting point that is the representation of the corresponding one of said first, second, and third functions in said menu area to said display area being detected by~~

Ex. 1003 [Prosecution History] 326, 343

# CAFC: Amendments To Change A Word “suggest[s] ... the new word differs in meaning in some way from the original word.”



“when a word is changed during prosecution, the change tends to suggest that the new word differs in meaning in some way from the original word. ”

*Ajinomoto Co. v. ITC*  
932 F.3d 1342, 1351 (Fed. Cir. 2019)



# Applicant Clarified That “Gliding” Is A Swipe, Not Just Any Movement

## Interview agenda

For the interview, I would like to discuss the attached draft proposed amendment. Specifically, I would like to discuss the touch-and-glide thumb movement, variously referred to as “swiping”, “rubbing”, “gliding” and “sliding”. This movement is described in claim 1 as “an object touching a location in the touch sensitive area at which the representation of the function is displayed and then gliding along the touch sensitive area away from the location.”

Ex. 1003 [Prosecution History] 357

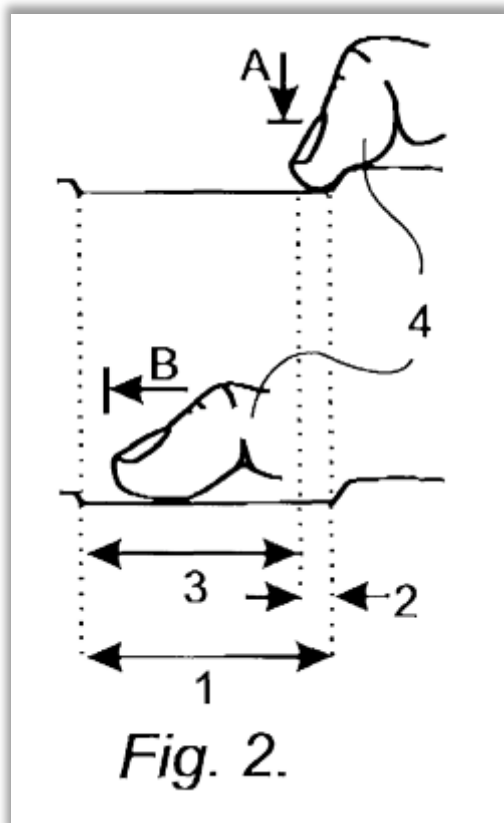
## RESPONSE TO OFFICE ACTION

include finger taps and movements. One such movement is a “rubbing” / “swiping” / “touch-and-glide” movement, whereby a finger touches a touch-sensitive screen at a location where an icon for a function is displayed, and then rubs / swipes / glides, along the touch screen away from the location without lifting the finger. The touch-and-glide

Ex. 1003 [Prosecution History] 269

# The Specification Is Consistent

Patent No.: **US 8,095,879 B2**



Ex. 2008 [N2-Advertisement-Video] (00:26-00:27)



# Petitioner's Abject Failure Of Proof As To Why "Dragging" Discloses "Gliding"



- No claim construction
- No plain meaning analysis
- No expert support or analysis

**Prosecution History Conclusively Eliminates Any Remaining Doubt**

# Prosecution History: Drag-And-Drop Is A “conventional operation[]” “distinct[]” From “novel touch-and-glide”

## RESPONSE TO OFFICE ACTION

Some distinctions between claimed invention and Hoshino		
	<b>Claimed invention</b>	<b>Hoshino</b>
<b>Objective</b>	Novel touch-and-glide user interface operation	Discriminate between two conventional operations; namely, (1) touch, and (2) drag-and-drop

Ex. 1003 [Prosecution History] 170

# The Applicant Disclaimed Drag-and-Drop

## RESPONSE TO OFFICE ACTION

Hoshino does not teach gliding a finger away from an icon. Instead, Hoshino teaches a drag-and-drop operation for moving an icon. In

Ex. 1003 [Prosecution History] 171

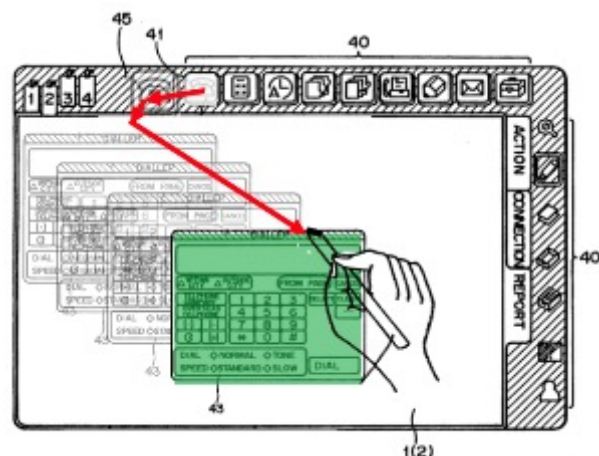


**“Critically, the very next sentence begins with the word *instead*, and states, ‘[i]nstead, the Candelore patent discloses pointers that point to the location of encrypted portions of the video data relative to the file. ... [W]e find no other way to interpret the applicants’ arguments. ....”**

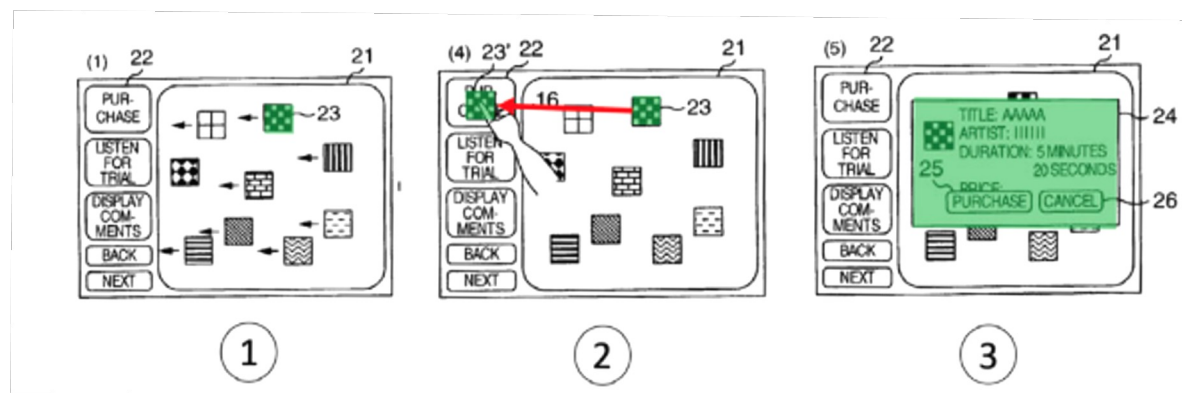
Hulu LLC v. DivX LLC  
IPR2021-01418, Paper 15, 23-24 (Mar. 15, 2022)

# Hoshino's And Hirayama-307's Drag-And-Drop Are Functionally Identical

**Hirayama et al.**



**Hoshino et al.**



**In both, the icon is activated by dragging and dropping it at A desired area**

# Reply Argues That Applicant Overcame Hoshino On A Different Basis Than The Distinction Between “Gliding” And “Drag-And-Drop”

## PETITIONERS’ REPLY

Thus, the distinction made with regard to the claim language was that the claimed function activation occurs in response to “(1) touch, followed by (2) a glide,” whereas Hoshino’s function activation requires a separate and distinct “hard touch” or “push-in.” The applicant did not disclaim or disavow “drag-and-drop” operations in general. EX1051, ¶¶43-46; *Omega Engineering, Inc v. Raytek Corp.*, 334 F. 3d 1314, 1324 (Fed. Cir. 2003).

Reply, 7-8



## Federal Circuit: Disclaimer Can Be Based On Any Statement By Applicant



"We find ***no support for Uship's proposition that prosecution disclaimer applies only when applicants attempt to overcome a claim rejection.*** Our cases broadly state that ***an applicant's statements to the PTO characterizing its invention may give rise to a prosecution disclaimer.*** .... For example, an applicant's remarks submitted with an Information Disclosure Statement can be the basis for limiting claim scope."

*Uship Intellectual Props., LLC v. United States*  
714 F.3d 1311, 1315 (Fed. Cir. 2013)



## Reply: Hirayama-307's Is Not A Drag-And-Drop

### PETITIONERS' REPLY

#### **2. Hirayama-307 Does Not Drag Icon 41, is Not a “Drag-and-Drop” Operation.**

Even if the file history excluded “drag-and-drop” operations from claim 1 (it does not), Hirayama-307's operation is not a “drag-and-drop” operation for multiple reasons (Resp., 26-31; EX2007, ¶¶59-67). EX1051, ¶60.

Reply, 9

# Hirayama-307 Confirms 14x That It Utilizes A Dragging Operation

## Hirayama et al.

various functions with a point of the pen and drags the pen along the surface of the display portion to a display

Abstract

More specifically, it is an object of the present invention to provide a data processing apparatus in which the user can activate or deactivate a designated function by the user when the user drags a pen.

It is another object of the present invention to provide a data processing apparatus in which a starting or ending position of a dragging operation can be designated in natural fashion.

1 as shown by an arrow B in FIG. 3B, the user moves the point of the pen 3 in the arrow B direction and drags the pen 3 to the position shown by the broken line, then

above, the user can activate or deactivate the designated function only by dragging the pen 3. Further,

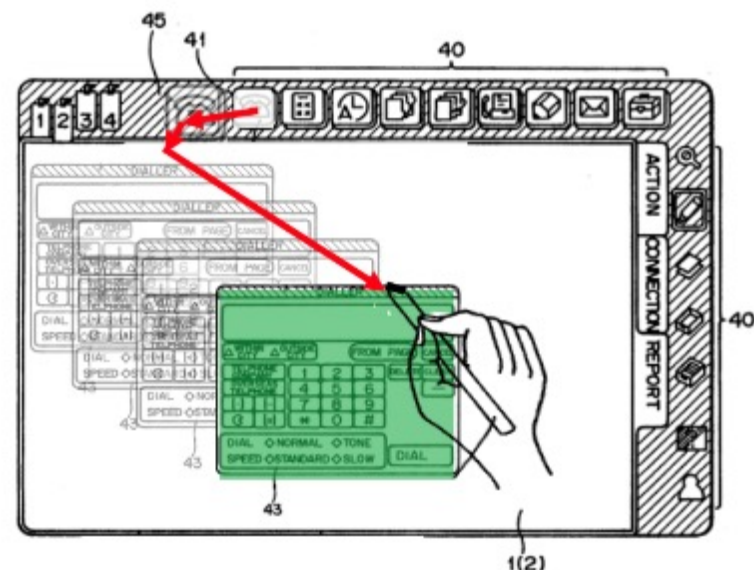
some operation can be removed, and the starting and ending of the dragging operation of the pen 3 can be carried out very clearly. Furthermore, the present in-

1:52-59

6:10-13

7:8-10

7:22-24



# Hirayama-307 Is A Drag-And-Drop Even If It Did Not Have Visual Feedback During Dragging

## SECOND DECLARATION OF CRAIG ROSENBERG, PH.D.



61. It should also be noted that while Petitioner disputes whether Hirayama-307 provides feedback to the user by visually showing icon 41 as being dragged during the entirety of the dragging process, Pet., 60-62, this is irrelevant to the fact that Hirayama-307's gesture is a drag-and-drop operation. From the perspective of the user, some form of Hirayama-307's dialing application is logically dragged (and behaves as if it is being logically dragged) with the movement of the stylus, and is dropped at the location where the stylus leaves the screen. It is true that, as I will explain in paragraphs 81-82, it was (and is) preferable in most instances to have an icon be visually shown as moving or being duplicated during "drag-and-drop" as the user moves the stylus/finger in order to provide feedback to the user. However, if a GUI, for any reason, does not provide interim feedback to the user by visually showing the icon actually moving with the stylus/finger, that does not change the nature of the operation as a drag-and-drop operation.

# Petitioner's Assertion That A Drag-And-Drop May Not Drop On An Area Of Screen Is Refuted By Its Own Expert

## Petitioner's Reply

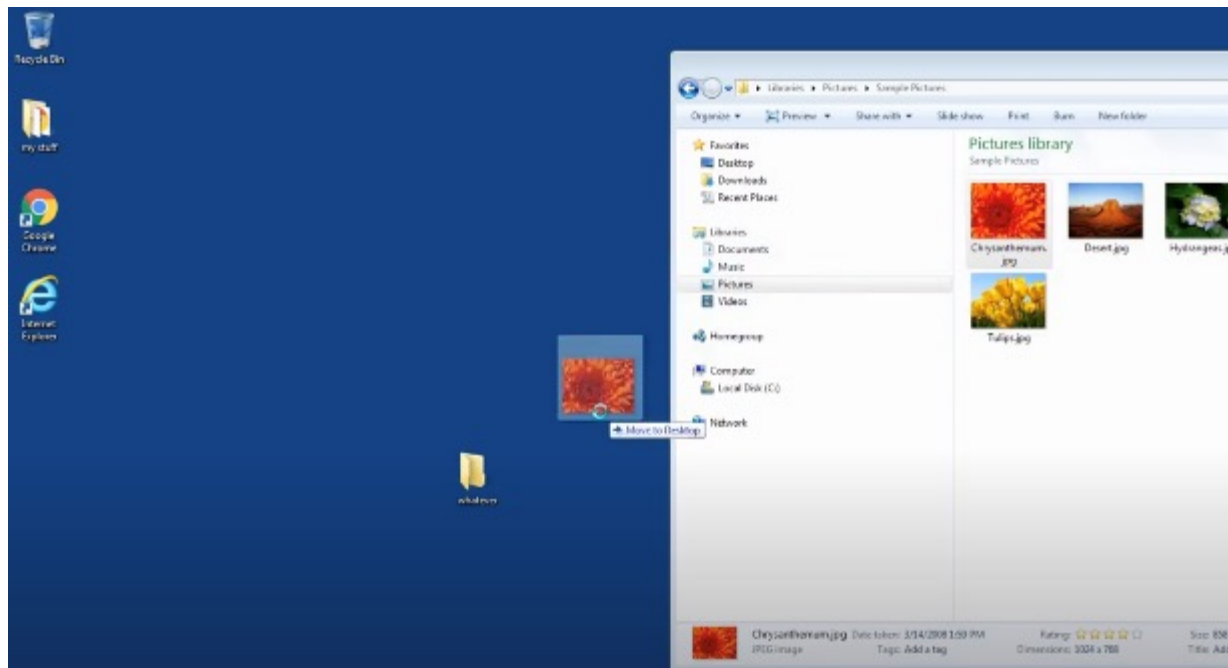
*"Notably, a drop target is an object, not merely an area of the screen."*

Reply, 18-19

## Petitioner's Expert

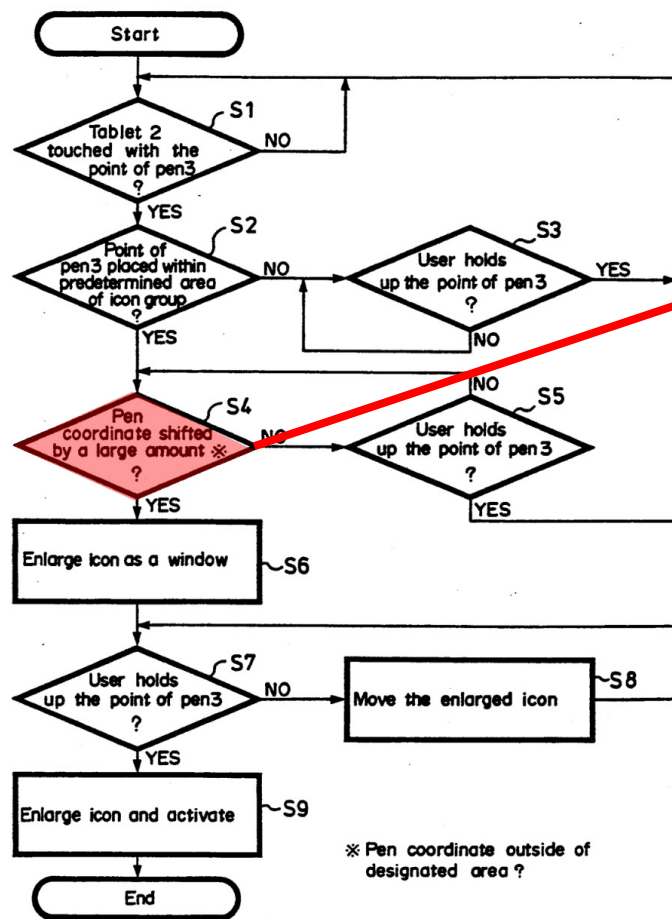
*"for example, you drop an icon onto the screen."*

Ex. 2005 [Bederson-Depo.] 141:10-12



# Fig. 4A Does Not Change The Nature Of Hirayama's "Dragging" Movement

FIG. 4A



**Pen Shifted Through Dragging Motion**

above, the user can activate or deactivate the designated function only by dragging the pen 3. Further,

Ex. 1006 [Hirayama-307] 7:8-10

some operation can be removed, and the starting and ending of the dragging operation of the pen 3 can be carried out very clearly. Furthermore, the present in-

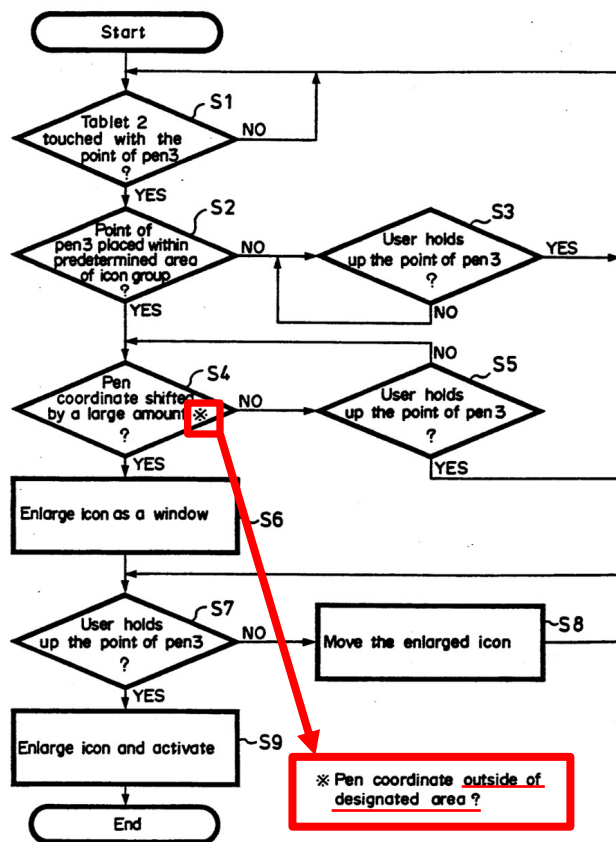
Ex. 1006 [Hirayama-307] 7:22-24

# “Shifted By A Large Amount” Is Not To Determine A “Glide,” But To Determine If Pen Is Dragged Outside Of Hatched Area

Hirayama-307

Petitioner's Expert

FIG. 4A



“A POSA would most likely program **the minimum y shift amount** to be calculated at the time the pen touches the icon as **the distance between the point touched within the icon and the bottom of the hatched area.**”

Ex. 1051 [Bederson-Reply-Decl.] 44-45 n. 2



# Petitioner's Attempt To Analogize Hirayama-307's Drag-And-Drop To Glide Activation Is Misplaced

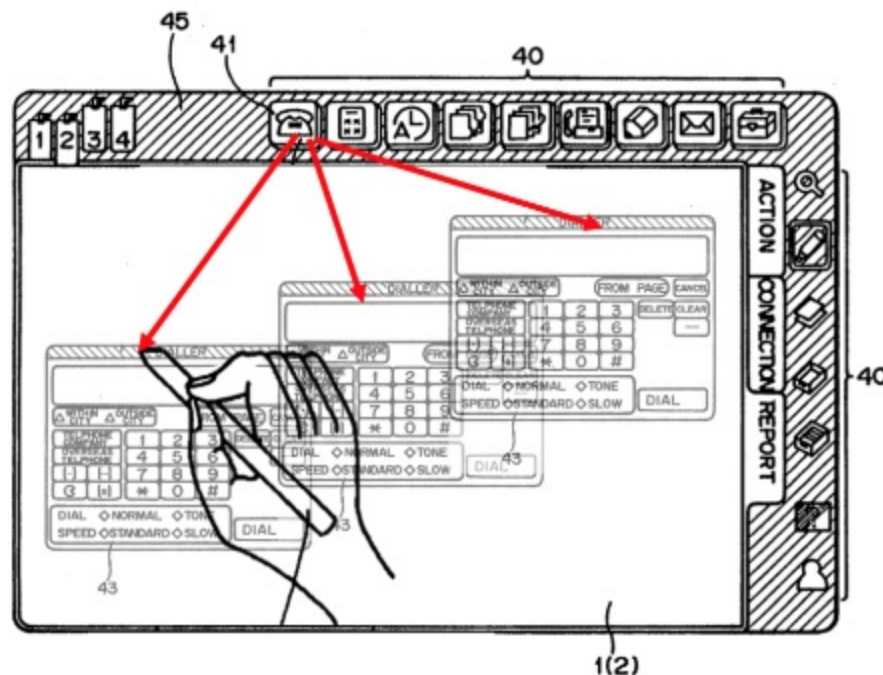
## Reply:

(FIG. 4A) does not determine whether a target object is contacted. Instead, at the end of the gliding and pen lift off, the same event occurs—the window 43 is opened and activated. EX1053, 99:13-100:9. Thus, even if the Board determines

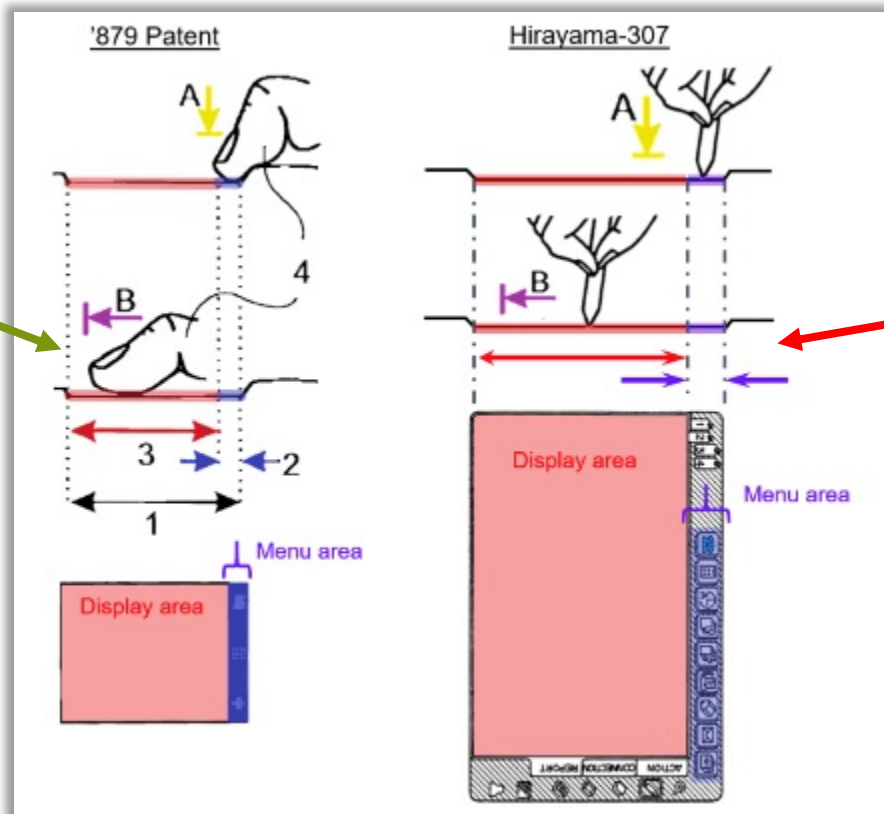
Reply, 19

## Hirayama-307:

At the end of gliding, “the same event” does not occur. The enlarged window is placed at the precise location the dragged icon is dropped



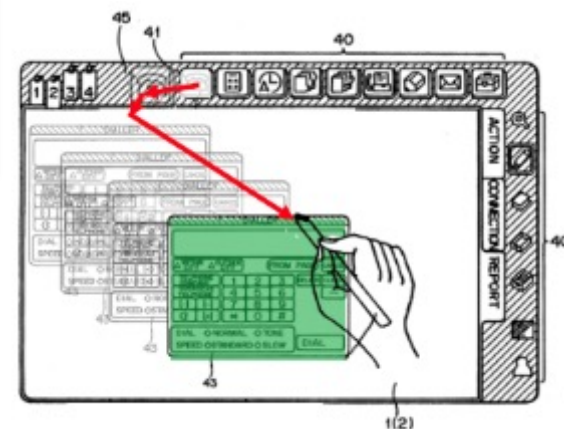
# Petitioner's Shallow Comparison Of Made-up Hirayama-307 Figure With '879 Figs. 1-2 Ignores The Distinct Movements



Activates icon through glide/swipe motion

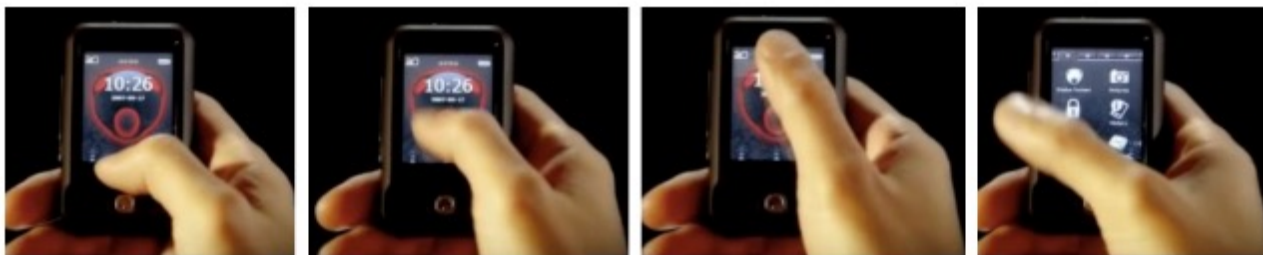
Activates by dragging icon outside hatched area and dropping at desired location

Reply, 20



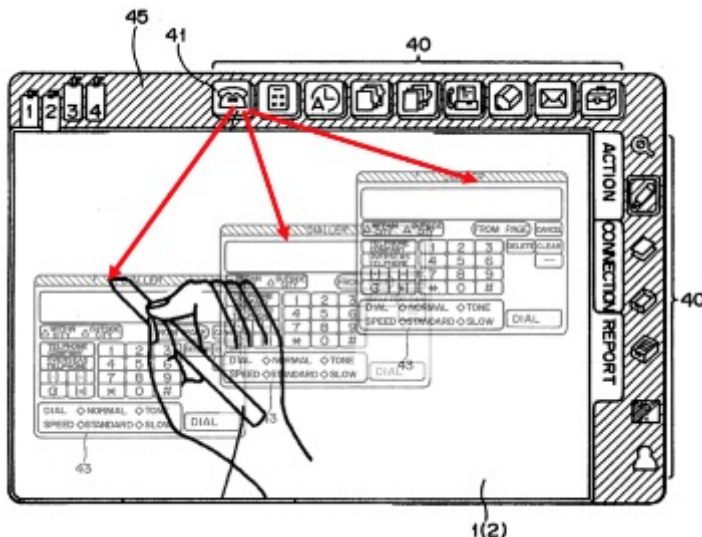
# Petitioner Wrongly Claims The N2's Glide/Swipe Is "Indistinguishable" From Hirayama-307's Drag-And-Drop

## Neonode Phones Implementing "Gliding":



Ex. 2008 [N2-Advertisement-Video] (00:26-00:27)

## Hirayama-307's Dragging Icon And Dropping It At Desired Location:



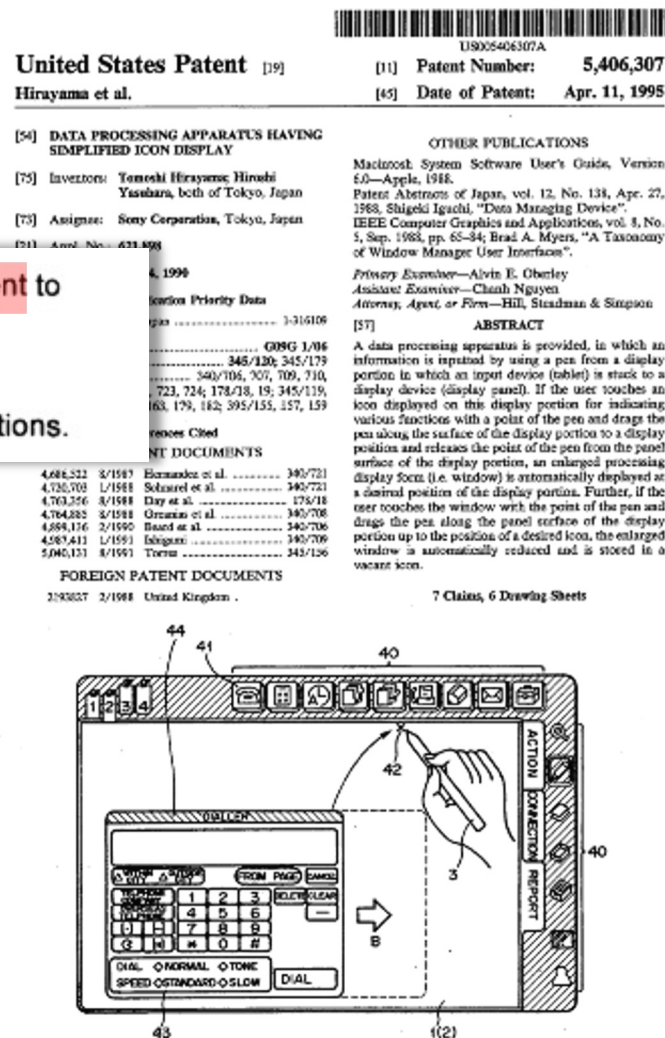
# Examiner Considered Hirayama-307 "Pertinent," But Correctly Did Not Rely On It To Disclose "Gliding ... Away"

## Office Action

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hirayama et al. (US # 5,406,307) teaches a method of activating functions.

Ex. 2009 [2006-03-23 Non-Final Rejection] 15



# The Distinction Between Hirayama-307's Drag-And-Drop And Patent's "Gliding" Matters

## SECOND DECLARATION OF CRAIG ROSENBERG, PH.D.



65. The distinction between “gliding ... away” and a drag-and-drop gesture is material, even though they may have overlapping movements. In the field of human computer interaction, even small differences between gestures can have substantial consequences. Notably, and as discussed in greater detail in paragraphs 38-49 Neonode’s N1 and N2 phones were widely praised for their intuitive gliding feature. *See also, e.g.*, Exs. 2012, 2013 (praising the swiping feature, calling it “simple and brilliant”). It is most unlikely that Neonode’s phones would have received such praise if they replaced their seamless gliding functionality with a cumbersome drag-and-drop operation as shown in Hirayama-307.

Ex. 2007 [Rosenberg-2nd-Decl.] ¶ 65

***If this sounds like the dreaded "gestures" that never really caught on in pen computing, it's not. The swipes are much simpler ....***

Ex. 2012 [Pen-Computing-Magazine-N1-Phone-Review] 2-3

**Pen Computing**  
COVERING MOBILE COMPUTING & COMMUNICATION



# Petitioner's Ren Reference Confirms: Even Though Slide-Off And Slide-Touch Can Have Identical Stylus Movement, Slide-Touch Was Objectively And Subjectively Superior



## SECOND DECLARATION OF CRAIG ROSENBERG, PH.D.

of the icon, and is then removed from the screen. *Id.* Therefore, the two gestures can be identical in the stylus movement, but different only in where the stylus lands on, and is removed, from the screen. Despite this seemingly small difference, Ren was able to objectively and conclusively determine that “[t]he results showed that the Slide Touch strategy was the best of the six, in terms of selection time (Figure 5), error rate (Figure 6), and subject preference (Figure 9).” *Id.*, 402.

Ex. 2007 [Rosenberg-2nd-Decl.] ¶ 66



# Table Of Contents

1. Secondary Indicia
2. “gliding ... away” (All Claims)
3. **“the representation of the function is not relocated or duplicated during the gliding” (All Claims)**
  - A. Hirayama-307 alone**
  - B. Hirayama-307 And Ren
4. “applications and files” (Claim 6)
5. “a shell upon an operating system” (Claim 15)


# Grounds Do Not Render Obvious “the representation of the function is not relocated or duplicated during the gliding”

**Patent No.: US 8,095,879 B2**

1. A non-transitory computer readable medium storing a computer program with computer program code, which, when read by a mobile handheld computer unit, allows the computer to present a user interface for the mobile handheld computer unit, the user interface comprising:

a touch sensitive area in which a representation of a function is provided, wherein the representation consists of only one option for activating the function and wherein the function is activated by a multi-step operation comprising (i) an object touching the touch sensitive area at a location where the representation is provided and then (ii) the object gliding along the touch sensitive area away from the touched location, wherein the representation of the function is not relocated or duplicated during the gliding.

**Petition Relies On  
Hirayama-307 Alone  
Or In Combination  
With Ren**

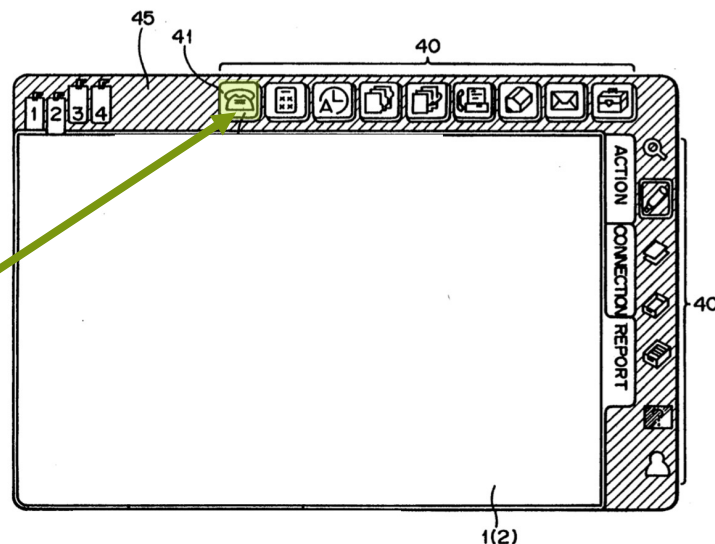


# Petitioner's Obviousness Is Premised On Claim That Hirayama's Icon 41 Is Not Described To Be "relocated or duplicated"

## PETITION

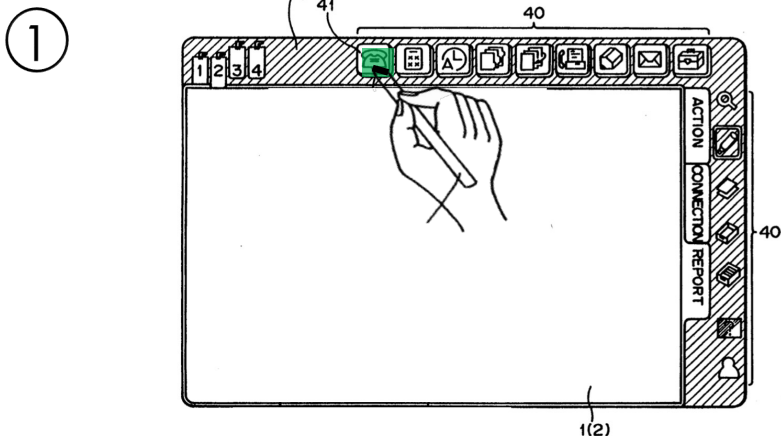
A POSA would have recognized Hirayama307 does not describe or show icon 41 ("*representation*") is dragged or otherwise relocated or duplicated during the movement of pen 3. Hirayama307 discloses "as the point of the pen 3

Pet., 60

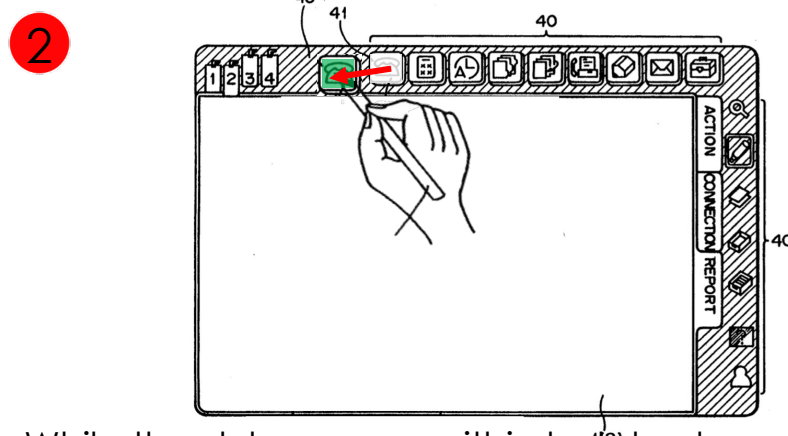


**Icon-41: "Representation Of A Function"**

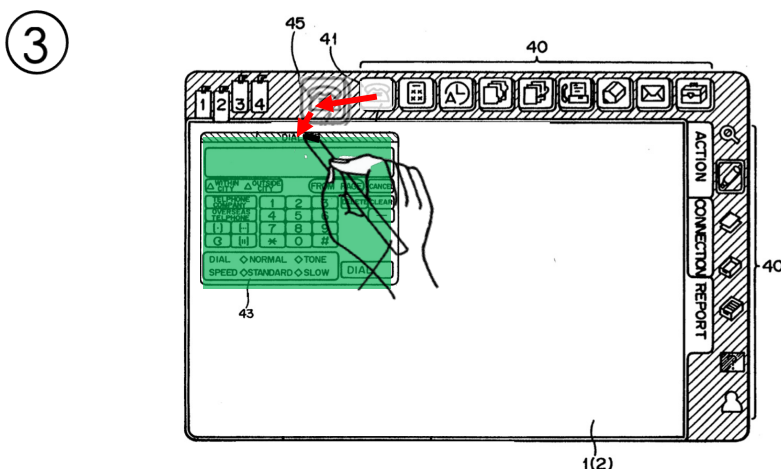
# Summary Of Hirayama-307's Operation



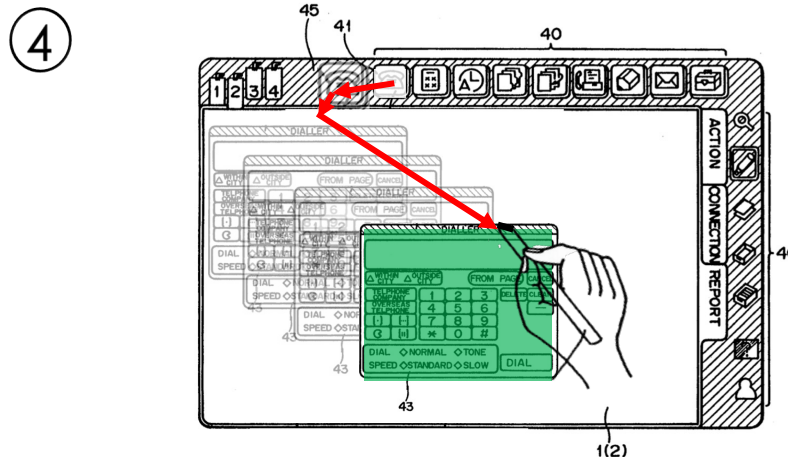
The stylus touches the **icon** the user wishes to "enlarge." *Hirayama-307, 2:1-4; 5:30-32.*



While the stylus moves within hatched area 45, **icon 41 moves with it**. *Hirayama-307, 2:5-8; 5:39-53.*



When the stylus moves outside of hatched area 45, **icon 41** is "enlarged as a **window 43**." *Hirayama-307, 2:8-13; 5:59-66.*



Enlarged **window 43** is placed at the position where the stylus is lifted from the screen. *Hirayama-307, 2:8-13; 5:59-66.*

# Summary Of The Invention: Hirayama-307 Expressly States That Icon 41 Is “Relocated Or Duplicated” During Dragging

## Hirayama et al.

### OBJECTS AND SUMMARY OF THE INVENTION

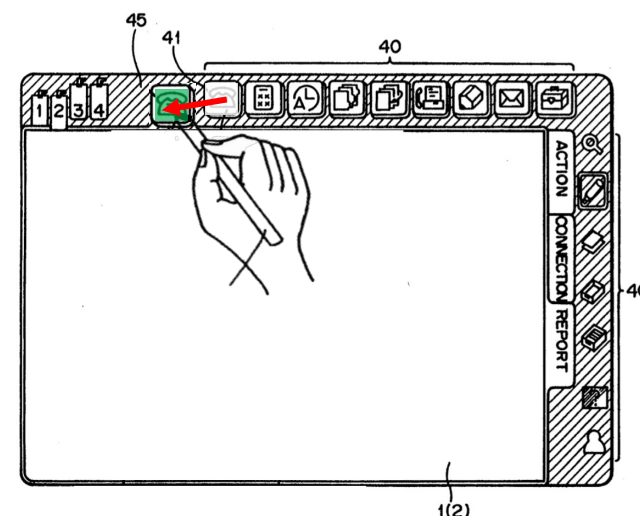
portion. A circuit is provided for detecting whether or not coordinate data indicative of the position in which the electronic pen touches the display device exists at a coordinate position in which a desired icon is displayed.

A circuit controls the icon display coordinate position such that the icon display coordinate position is moved in accordance with the movement of the position coordinate of the point of the pen. A circuit detects whether or not the position coordinate of the point of the pen is moved to a predetermined area and a circuit converts the icon into a window when it is detected that the point of the pen is apart from the display device within the predetermined area.

The pen touches the “desired icon” (e.g., icon 41)

**“The icon display coordinate position” moves with the pen**

“The icon” is “converted” into window (e.g., window 43) in the non-hatched display area



Ex. 1006 [Hirayama-307] 2:1-13



# Confirming Icon-41 Moves With The Pen, Icon-41 Is “Enlarged” During Dragging

Hirayama et al.

to step S3. During this period, other operations except the operation in which the icon is enlarged (icon is enlarged in the form of window) are executed. If the

*Hirayama-307, 5:38-40*

the routine proceeds to step S6. In step S6, the processing display form of the icon 41 designated is enlarged as a window 43 shown in FIG. 3B. It is needless to say that

*Hirayama-307, 5:64-66*

ging of the pen 3 can be designated naturally, and the window position or the icon position to be enlarged can be determined with ease.

*Hirayama-307, 7:13-15*

moved to a predetermined area and a circuit converts the icon into a window when it is detected that the point

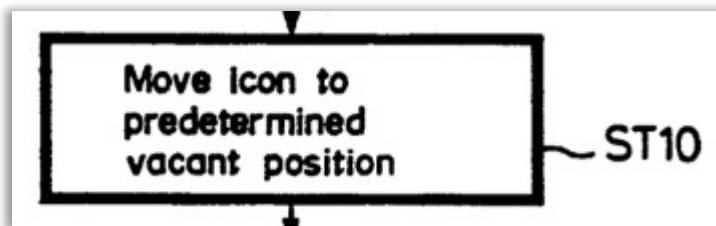
*Hirayama-307, 2:10-11*



# Confirming That Icon-41 Was “Relocated,” The Open Window Is Dragged To “Vacant” Position To Close

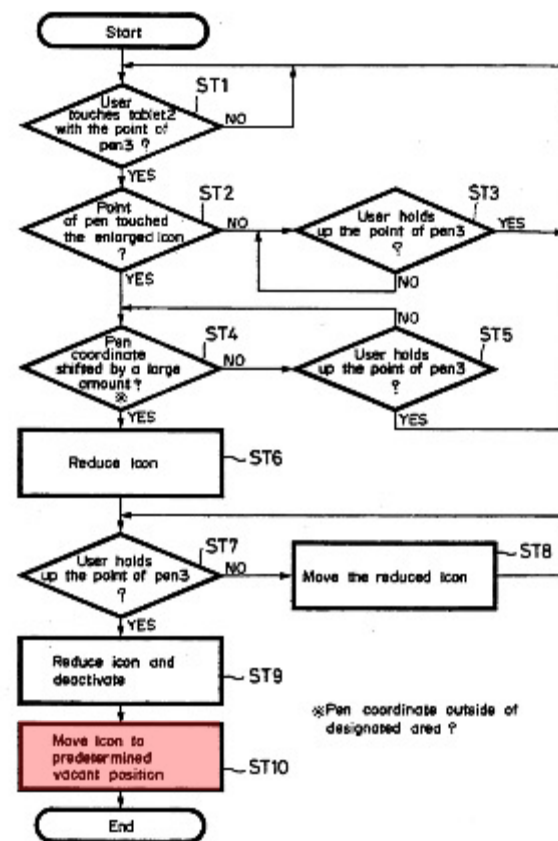
Hirayama et al.

routine proceeds to step ST10. In step ST10, the icon is moved **to the predetermined vacant position** and the processing is ended.



If Icon-41 Didn't Move, Why Would The Position Be “Vacant”?

FIG. 4B



2

tion. A circuit is provided to coordinate data indicating electronic pen touches the ribbon position in which a circuit controls the look. It is that the icon display corresponds with the movement of the point of the pen. All the position coordinates are to a predetermined origin and into a window when the pen is apart from the ribbon.

in accordance with a sensor output, a data processing unit, an input device and a output device and which is comprised of a circuit for electrically processing the sensor output to determine whether or not conditions at which the electronic device works at a predefined level.

low is displayed. A further window displays coordinate pairs for display coordinate pairs with the movement of a point of the pen. Another window displays the position coordinate of the pen to a predetermined scale. The window is divided into an upper and lower half.

point of the pen is apart from the predetermined area. The preceding, and other objects of the present invention, are set forth in the following claims.

**BRIEF DESCRIPTION OF THE INVENTION**

FIG. 1 is a front view of the computing apparatus according to the present invention;  
FIG. 2 is a systematic block diagram of the data processing system according to the present invention;  
FIGS. 3A, and 3B are front views of a display portion according to the present invention according to the present invention; and

4A and 4B were

As an embodiment of a data table according to the present invention, a table is described in detail with reference to FIG. 1, showing a front view of the data table according to the present invention, among apparatuses of the prior art, for example, a so-called portable type.

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tion. A circuit is provided to coordinate data indicating electronic pen touches the ribbon position in which a circuit controls the look. It is that the icon display corresponds with the movement of the point of the pen. The position coordinates are sent to a predetermined address into a window when the pen is apart from the ribbon.

low is displayed. A further window displays coordinate pairs for display coordinate pairs with the movement of a point of the pen. Another window displays the position coordinate of the pen to a predetermined scale. The window is divided into an upper and lower half.

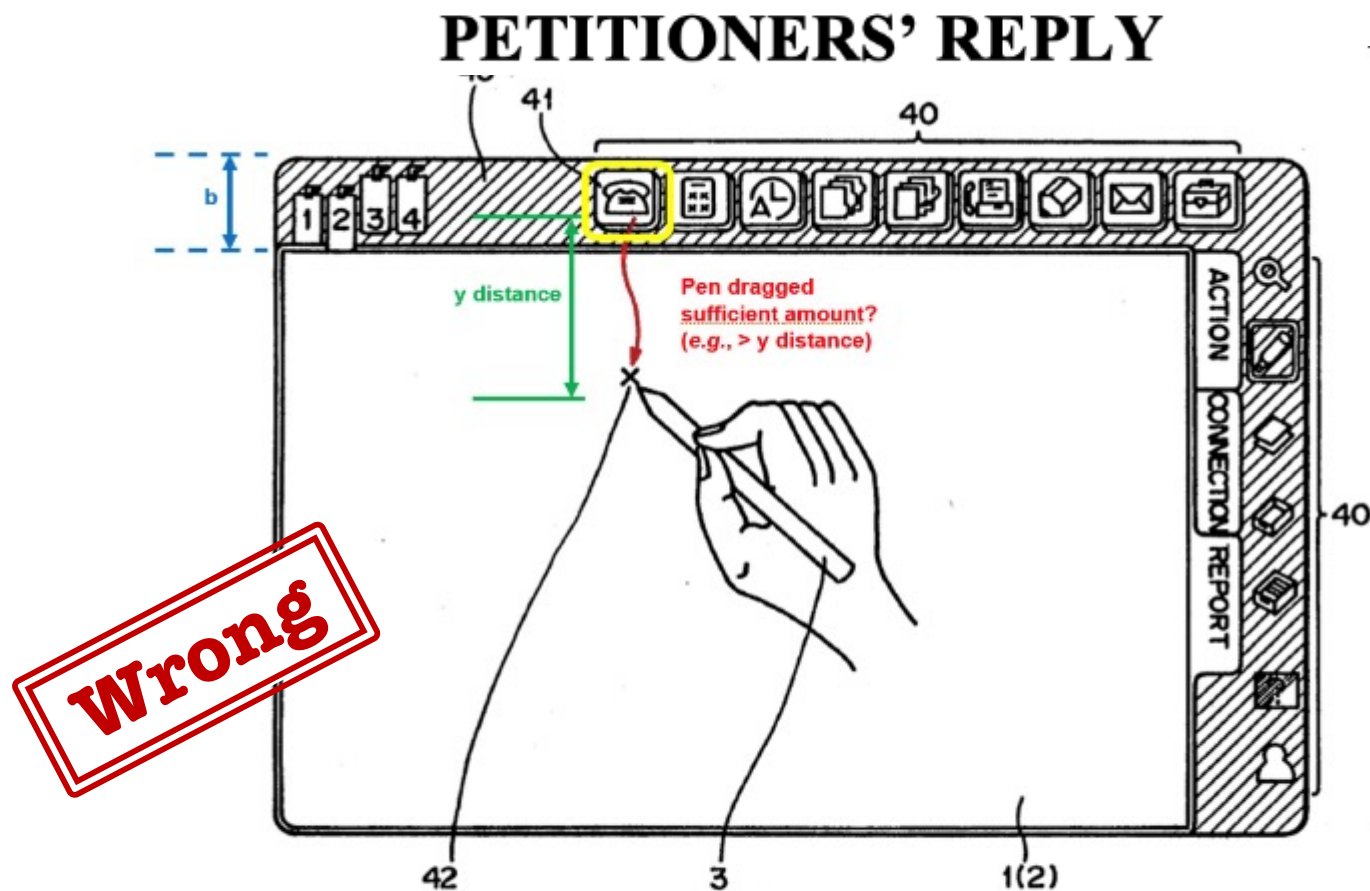
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Ex 2007 [Rosenberg Decl.] ¶¶ 78-79; POR, 42

# Petitioner's Reliance On Fig. 3A To Argue Icon-41 Is Not Relocated Or Duplicated During Dragging Is Misplaced



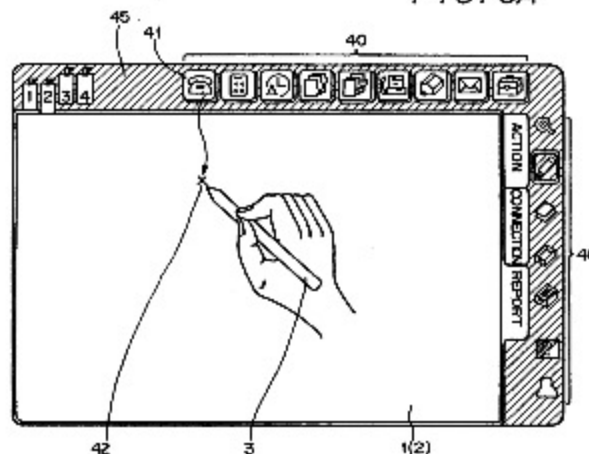
EX1006, FIG. 3A (annotated)

# Fig. 3A's Description Is Clear That It Denotes The State Of Device At Startup Before Any Dragging Operation Is Initiated

Hirayama et al.

In the above-described data processing apparatus of this embodiment., when the power switch 10 shown in FIG. 1 is depressed, icon groups 40 which make various processings possible are displayed on the display portion 1 as shown in FIG. 3A. When a desired processing,

FIG. 3A



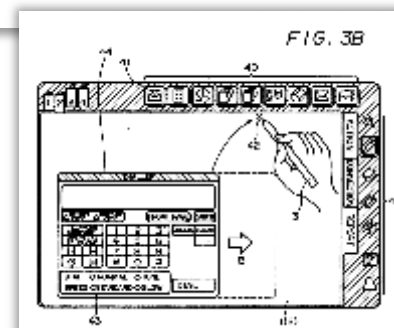
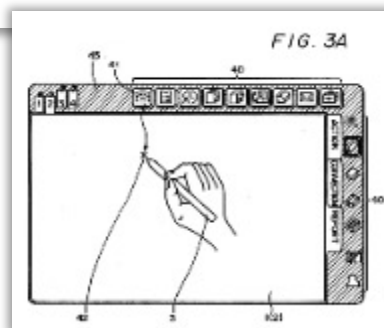


# If Fig. 3A Showed A Dragging Operation, Icon-41 Would Be Enlarged, As In Fig. 3B



## SECOND DECLARATION OF CRAIG ROSENBERG, PH.D.

that Fig. 3A represents the state of the device *before* icon 41 is being dragged. In connection with Figs. 3A and 3B, Hirayama-307 explains that “[i]f the pen coordinate is considerably shifted from the reference moving amount, or if the pen coordinate is outside of the predetermined designated area (e.g., the hatched area in this embodiment),” then icon 41 is “enlarged as a window 43 as shown in Fig. 3B.” Ex. 1006 [Hirayama-307] 5:59-66. In Fig. 3A, however, the tip of the pen is both outside of the hatched area, and has considerably shifted as it is well into the active screen area, *but* there is no enlarged window:



# Hirayama-878 Confirms Icons Are “Relocated” During The Dragging Operation And Their Location Is Vacant

## Petition:

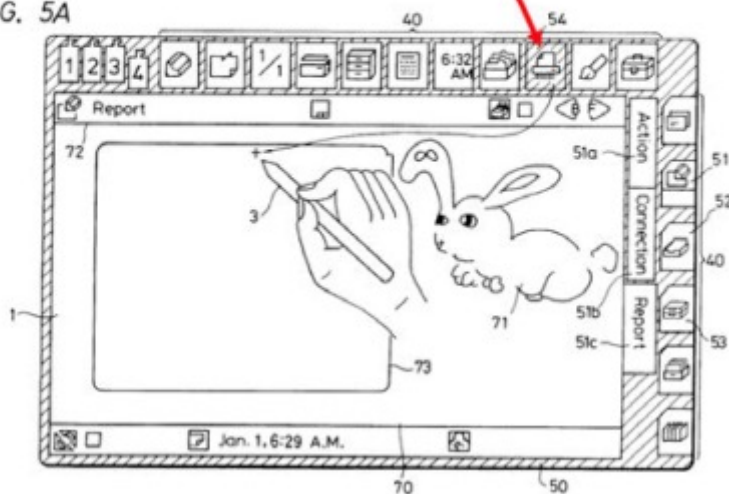
Hirayama878 has the same inventor and assignee as Hirayama307, and the figures present a similar user interface. Compare EX1006, FIGS. 3A-B, EX1009,

Pet., 70-71

## Hirayama-878

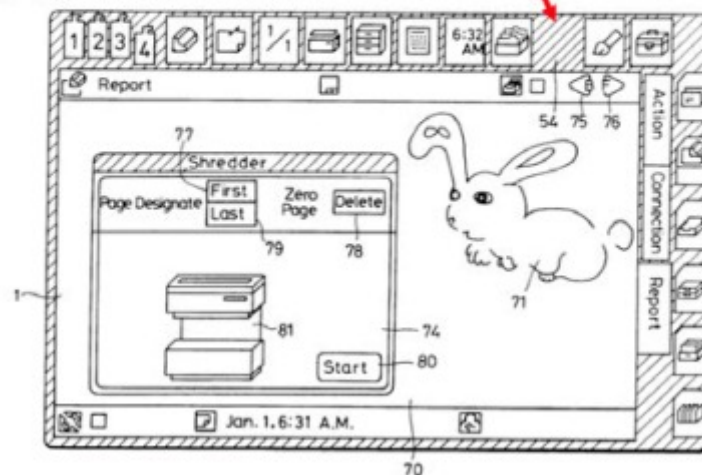
Hirayama-878 icon to be dragged and dropped into active screen area

FIG. 5A



The location of dragged and dropped icon is vacant

FIG. 5B





# Reply Argues: Hirayama-307 Description Discloses A Different Embodiment Than The Summary Of The Invention

## PETITIONERS' REPLY

Dr. Rosenberg's interpretation that the user "drags the icon outside of the hatched area" is based largely on the language in the summary of Hirayama-307 for "a first aspect of the present invention" (addressed below). EX2007, ¶59 (citing EX1006, 2:5-13). However, the detailed disclosure of the operation of Hirayama-307's interface, including the flow chart of FIG. 4A, discloses the multi-step operation of challenged claim 1 and informs a POSA that the dialler icon 41 is not moved with the gliding of the pen. EX1051, ¶¶61-62.

Reply, 10

## Why would detailed embodiment be contrary to the summary of invention?

## “Second Aspect” Of Hirayama-307’s Invention Is Merely To Close A Window, Where The Representation Is Also Duplicated/Relocated

### Hirayama et al.

In accordance with a second aspect of the present invention, a data processing apparatus is provided in which an input device and a display device are stuck one upon the other and which utilizes an electronic pen. It is comprised of a circuit for detecting whether or not the electronic pen touches the display portion. A circuit detects whether or not coordinate data indicative of the position at which the electronic pen touches the display device exists at a coordinate position in which a desired window is displayed. A further circuit controls the window display coordinate position such that the window display coordinate position is moved in accordance with the movement of the position coordinate of the point of the pen. Another circuit detects whether or

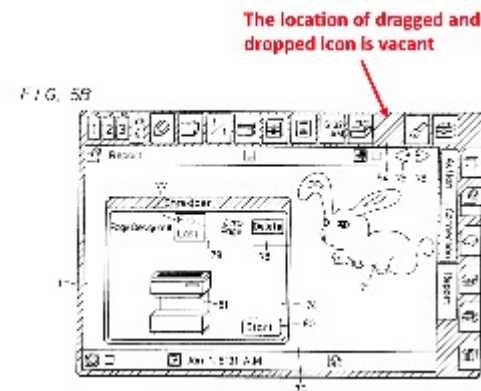
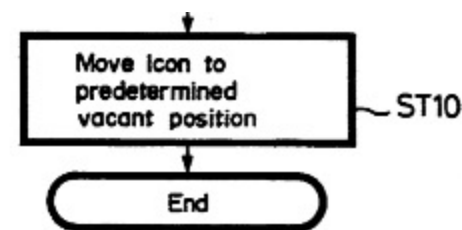
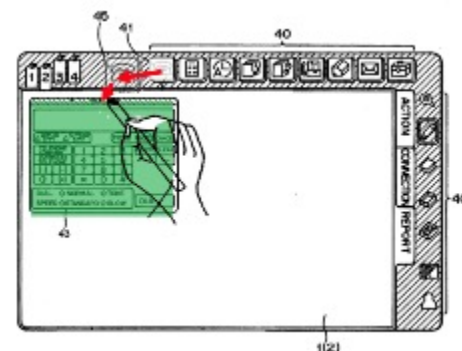
Ex. 1006 [Hirayama-307] 2:14-27

# Like Its Summary, Hirayama-307's Detailed Description Teaches Icon-41 Is Relocated/Duplicated During Dragging

✓ Hirayama-307 repeatedly states that its **icon is "enlarged"** during the dragging operation (Hirayama-307 at, e.g., 5:39-40, 5:64-66, 7:14-15, 2:10-11)

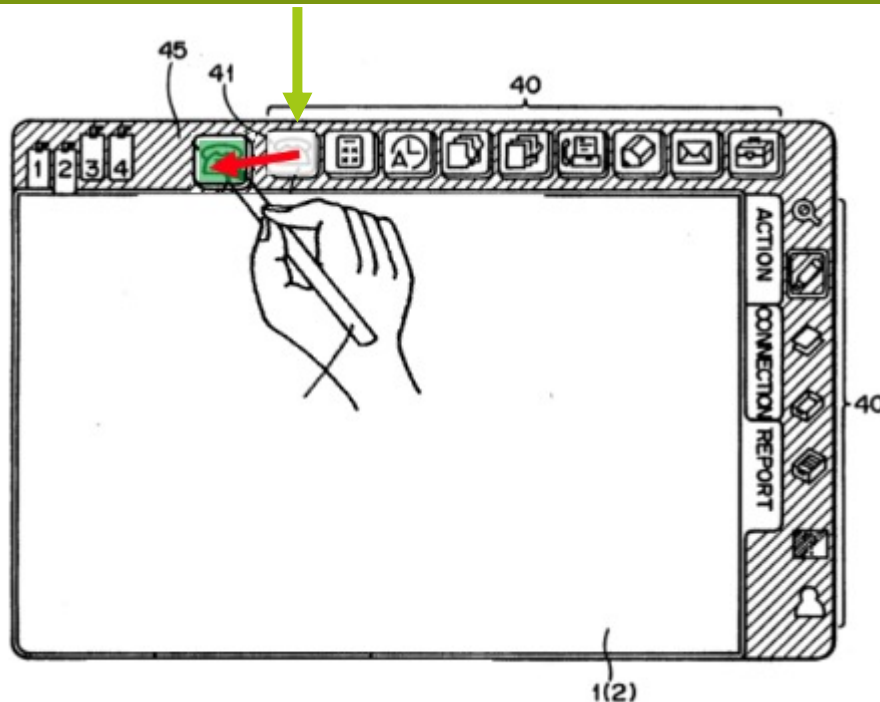
✓ Hirayama-307 provides that an open **window is dragged back "to the predetermined vacant position"** (Hirayama-307 at, e.g., 7:3-6; Fig. 4B.)

✓ **Hirayama-878** also shows a **vacant position** for the relocated icon (POR, 45-46)



# Even If The Position Of Enlarged Icon-41 Were Not “Vacant,” It Only Means That Icon-41 Was “Duplicated” During Gliding

Hirayama-307 Does Not Disclose The Claim Whether Or Not Location Of Icon-41 Is Vacant During Dragging



Patent No.: US 8,095,879 B2

1. A non-transitory computer readable medium storing a computer program with computer program code, which, when read by a mobile handheld computer unit, allows the computer to present a user interface for the mobile handheld computer unit, the user interface comprising:

a touch sensitive area in which a representation of a function is provided, wherein the representation consists of only one option for activating the function and wherein the function is activated by a multi-step operation comprising (i) an object touching the touch sensitive area at a location where the representation is provided and then (ii) the object gliding along the touch sensitive area away from the touched location, wherein the representation of the function is not relocated or duplicated during the sliding.

is not relocated or duplicated

# The Petition Presented No Motivation Why A POSITA Would Modify Hirayama-307 To Remove Visual Feedback During Dragging





# Providing Feedback During Dragging Was And Is Important And A Fundamental Aspect Of User Interface Design



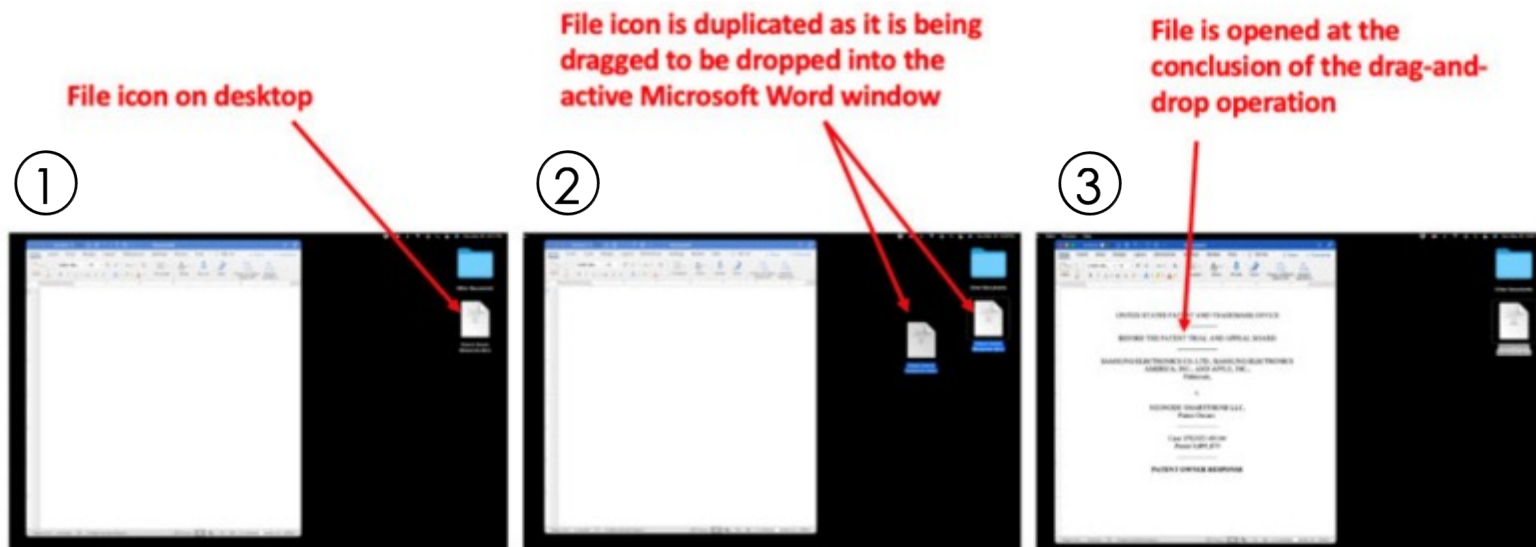
## SECOND DECLARATION OF CRAIG ROSENBERG, PH.D.

83. In graphical user interfaces, it is important to provide visual feedback to the user during an operation. This helps, for example, inform the user that the operation is in fact being successfully performed. It also helps design the graphical user interface as close as possible to real life experiences outside of the virtual world, and give the user a real-life “feel.” This is an important concept in GUI design. In the context of a dragging operation, this feedback mechanism was, and continues to be, generally provided by visually showing the icon being moved or duplicated across the screen during the drag operation. This would help the user receive feedback that, as the user drags an icon with the mouse/stylus/finger, the icon is in fact being dragged and the drag-and-drop operation is successfully in progress. This would also help the user get a real life “feel” for the drag-and-drop operation by visually seeing an icon being dragged.

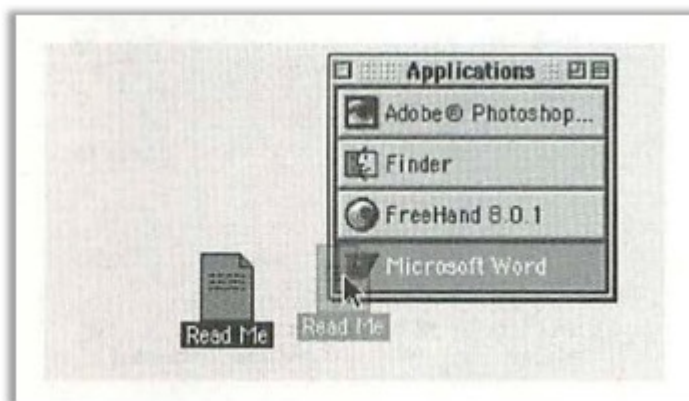
Ex. 2007 [Rosenberg-2nd-Decl.] ¶ 83



# Relocation/Duplication Has Been The Industry Standard Feedback Mechanism For Drag-And-Drop



Ex. 2007 [Rosenberg-2nd-Decl.] ¶ 85



Ex. 2044 [Bederson-2nd-Depo.] 8:9-24; 9:8-25; 10:2-19; 10:25-11:3; 11:12-22; 15:5-15; 16:22-17:23

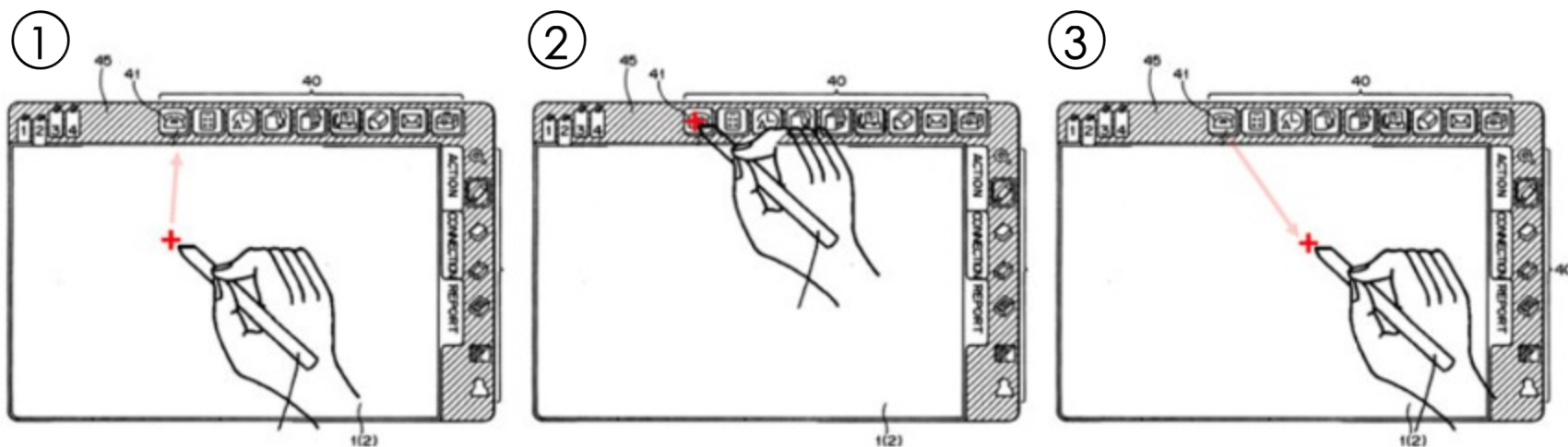
# Petitioner Relies On A Cursor To Suggest Hirayama-307's Visual Feedback Of Dragging Is Unnecessary

## PETITIONERS' REPLY

Moreover, a cursor was a well-known way to provide a user with feedback as to the location of their finger or pen during a drag/glide movement. *See, e.g.*, EX1012, 17, 19; Pet., 60-62. This is consistent with Hirayama-307's illustration of cursor 42 and desire for the user to drag the pen to a position they can clearly designate for opening of the window. EX1006, 7:16-24. Hirayama-307's FIG. 3B,

Reply, 16

# A Cursor Does Not Inform The User Whether The Drag Operation Is Being Successfully Performed



**With only the cursor as feedback, the user in the right photo would not know if the dragging of the pen is also successfully dragging icon-41**

# Reply's New Motivation Is Untimely And Unsupported

## PETITIONERS' REPLY

Moreover, a POSA would have been motivated to not visually drag the icon with the pen because doing so was computationally expensive at the time. In a

Reply, 25

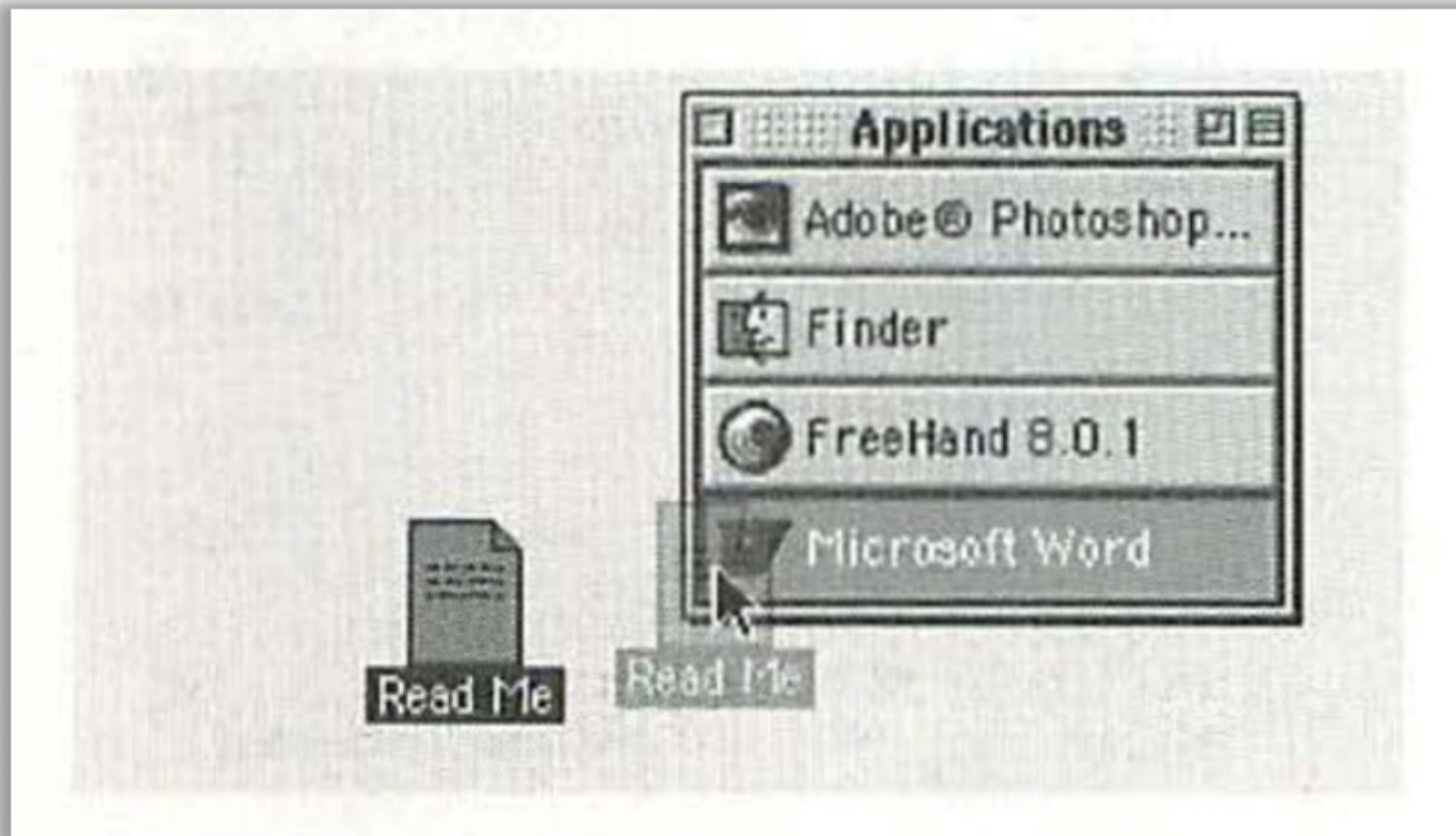
# A New Motivation To Modify References Presented For The First Time In A Reply Is Untimely



Finally, Petitioner makes a new argument in its Reply that Geagan's proxies should be modified based on Vishlitzky "to maintain . . . the last few seconds [of a live broadcast] to account for any buffering at the client prior to playback." Pet. Reply 18 (citing Ex. 1021 ¶ 18). Patent Owner contends this is an improper reply argument based on a new theory. PO Sur-reply 17. Patent Owner also contends that nothing in the asserted references supports this argument, particularly with regard to using sliding windows to buffer live content. *Id.* We agree with Patent Owner on both accounts. Petitioner waived this argument because it was not presented in the Petition. See *Consolidated Trial Practice Guide*, 37 (Nov. 2019)<sup>4</sup> ("Petitioner may not submit new evidence or argument in reply that it could have presented earlier, e.g. to make out a prima facie case of unpatentability."). And, even if Petitioner's argument were presented timely, nothing in either Geagan or Vishlitzky supports Petitioner's new theory about buffering live streams.

*Dish Network L.L.C. v. Sound View Innovations LLC*,  
IPR2020-01276, Paper 40, 33 (PTAB Feb. 8, 2022)

# Petitioner's Expert Admitted: 2002 Systems Visually Showed Dragging With No "Computational" Challenges



Ex. 2044 [Bederson-2nd-Depo.] 8:9-24; 9:8-25;  
10:2-19; 10:25-11:3; 11:12-22; 15:5-15; 16:22-17:23



# Table Of Contents

1. Secondary Indicia
2. “gliding ... away” (All Claims)
3. “the representation of the function is not relocated or duplicated during the gliding” (All Claims)
  - A. Hirayama-307 alone
  - B. Hirayama-307 And Ren**
4. “applications and files” (Claim 6)
5. “a shell upon an operating system” (Claim 15)

# The Board Already Rejected Petitioner's Combination Of Hirayama-307 With Ren

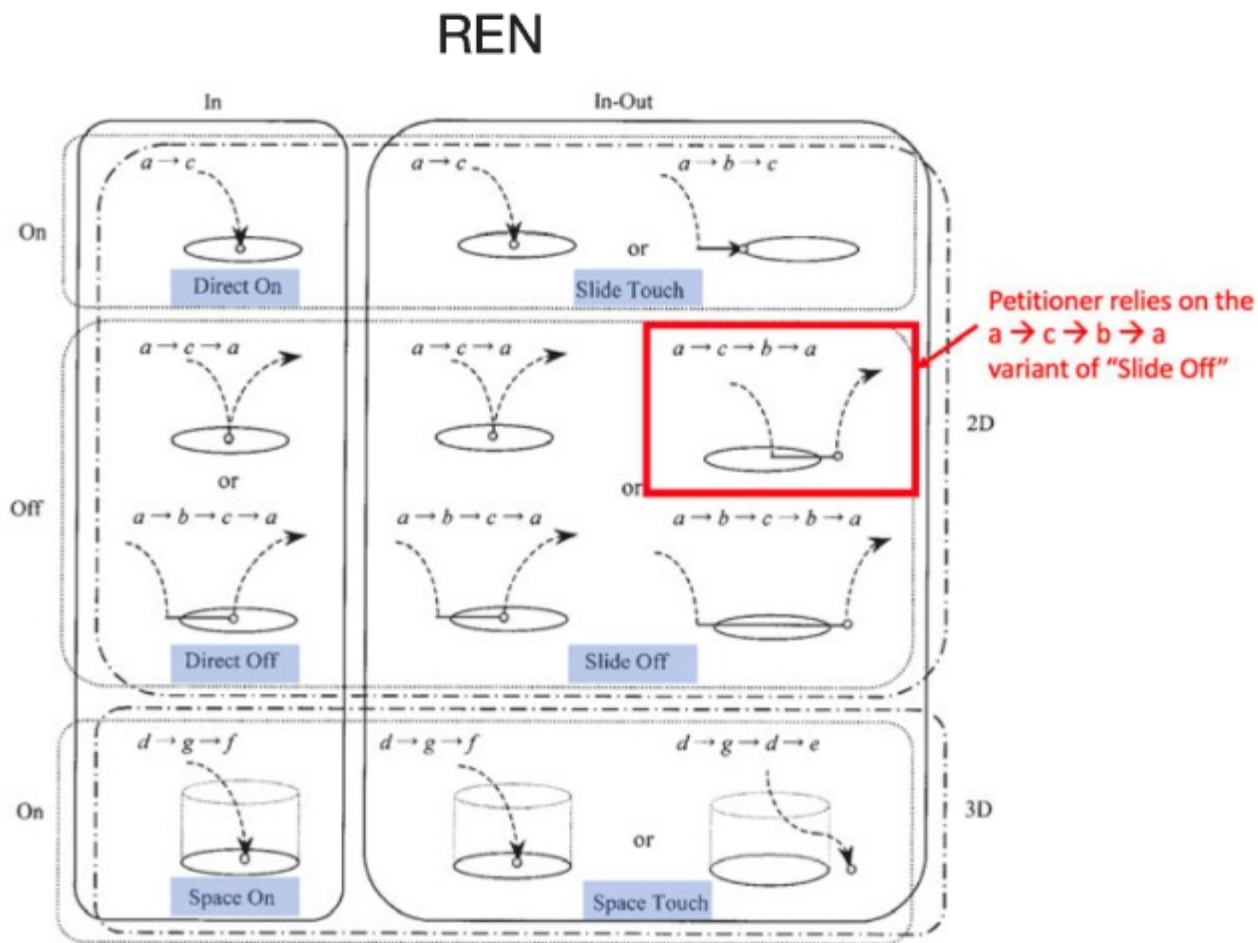


Petitioner fails to make a sufficient showing for the same reasons set forth above in connection with Petitioner's Ren and Tanaka combination. In particular, Petitioner's assertion that an ordinarily skilled artisan would have had reason to combine Hirayama307's and Ren's teachings because the references both are directed to solutions to the same problem establishes that the references are analogous art, but falls short of articulating reasoning with a rational underpinning to support the conclusion of obviousness. *See KSR*, 550 U.S. at 418. And Petitioner does not direct us to any "design need or market pressure to solve a problem," or any reason that an ordinarily skilled artisan would have selected a particular strategy from Ren to produce the claimed invention. *Id.*; *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d at 1072. Rather, Petitioner simply concludes that it would have been obvious to try. Although Petitioner cites to Dr. Bederson's testimony for support, Dr. Bederson does not elaborate on Petitioner's argument, as his testimony mirrors the Petition's conclusion. Ex. 1002 ¶ 162.

# Petition's Failure To Present A Prima Facie Case Mandates Rejection Of This Ground Without Any Additional Argument



# Petitioner Seeks To Combine Hirayama-307 With A Specific Variant Of One Of Ren's Six Categories Of Gestures



# The Petition Proposed Two Motivations To Combine Hirayama-307 With Ren

## PETITION

Ren discloses [1d]. Section IV.A; EX1002, ¶¶160-62. It would have been obvious to combine the teaching of Ren with Hirayama307. For example, Ren and Hirayama307 <sup>①</sup> both are directed to solutions to the same problem, namely target selection techniques in pen-based tablet systems. As another example, a POSA would have recognized Ren as disclosing a small number of selection techniques that <sup>②</sup> would have been obvious to try and implement with pen-based GUI interaction systems. Hirayama307 discloses an example GUI environment on

Pet., 62

# As The Board Already Found, Being Directed To Solutions To Similar Problems Does Not Provide A Motivation To Combine

Board: That “the references both are directed to solutions to the same problem establishes that the references are analogous art, but falls short of articulating reasoning with a rational underpinning to support the conclusion of obviousness.”

Paper 24, 20



Petitioner “had not proven a motivation to combine because it **merely (1) alleged** the references came from the same field of study and **address the same problem**; and (2) recited boilerplate legal conclusions untethered to any claim language.”

*Comcast Cable Communs., LLC v. Promptu Sys. Corp.*,  
838 F. App'x 551, 557 (Fed. Cir. 2021)



# Petition's "Obvious To Try" Rationale Fails To Show Either A Finite Number Of Possibilities, Or A Reason To Chose The Path Of Invention



"Evidence of obviousness, especially when that evidence is proffered in support of an '**obvious-to-try**' **theory, is insufficient unless** it indicates that the possible options skilled artisans would have encountered were '**finite,**' '**small,**' or '**easily traversed,**' **and** that skilled artisans would have had **a reason to select the route that produced the claimed invention.**"

*In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*,  
676 F.3d 1063, 1072 (Fed. Cir. 2012)

# Universe Of Selection Gestures Is Not Finite

## REN

state to an arbitrary final state can become a strategy. For example, in the “*Slide Touch*” strategy the initial state is *a*, and the final state is *c* (see Section 2.2); in the “*Direct Off*” strategy, the initial state is *a*, and the final state is *a* (see Section 2.2). Theoretically, an infinite range of selection strategies exists.

Ex. 1004 [Ren] 389

## DEPOSITION OF DR. BENJAMIN B. BEDERSON

“... there may be others. ... in the last couple of hours, we've identified two others .... ”

Ex. 2005 [Bederson-Depo.] 50:19-51:8

# Petition Points To No Deficiency In Hirayama-307 Or Other Reason Why POSITA Would Select The Route That Produced Invention

## SECOND DECLARATION OF CRAIG ROSENBERG, PH.D.



93. There is no apparent deficiency in Hirayama-307 that a combination with Ren would remedy and Petition cites none. In fact, as explained below, the Petition's proposed combination only deteriorates Hirayama-307. Specifically, Petitioner proposes that a POSITA would have combined Hirayama-307 with Ren so that Hirayama-307's drag-and-drop would not "relocate or duplicate" icon-41 during the dragging process. Pet., 62. However, as explained, the user feedback of relocating or duplicating an icon during the drag of a drag-and-drop operation was, and continues to be, significant as also implemented by main-stream systems such as MS Windows and MacOS and eliminating user feedback would worsen the user's experience.

Ex. 2007 [Rosenberg-2nd-Decl.] ¶ 93

# No Motivation To Combine Systems That Independently Operate Efficiently To Accomplish Similar Tasks



“[B]oth of these references independently accomplish similar functions, namely, draining fluids. **Because each device independently operates effectively**, a person having ordinary skill in the art, who was merely seeking to create a better device to drain fluids from a wound, **would have no reason to combine the features of both devices into a single device.**”

*Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*,  
688 F.3d 1342, 1369 (Fed. Cir. 2012)

# Ren Itself Points POSITA To Use “Slide Touch,” Not The “Slide Off” That The Petition Seeks To Combine With Hirayama-307

## REN

4.4.2 *The Best Individual Strategy and Best Strategy Group.* The *Slide Touch* strategy is the best of the individual strategies. When the results for Experiment One and Experiment Two were compared in simple pairs we found that the *Slide Touch* Strategy was the best strategy [Ren and Moriya 1997b; 1999]. The post hoc Tukey HSD test showed that, in Experiment One, the *Slide Touch* was indeed the best strategy. In Experiment Two, Tukey’s test showed that the *Slide Touch*, *Slide Off*, and *Space Touch* strategies were all better with no significant difference, but considering the (Tukey) results of Experiment One and that in both Experiments the *Slide Touch* strategy had the highest subject preferences, we concluded that the *Slide Touch* strategy is the single best strategy.

## 5. CONCLUSION AND FUTURE WORK

Experiment One identified the best of the six individual strategies by comparing the strategies individually and by groups. These results, when combined with Experiment Two data, showed that the best strategy was the *Slide Touch* strategy when the strategies were evaluated individually, and the best strategy group was the *In-Out* strategy group when evaluated in groups. Furthermore, differences between strategies are influenced by variations in target size; however, they are not affected by pen-movement-distance and pen-movement-direction.



# Ren's Two Experiments: Petition's Relied Upon "Slide Off" Was Third And Fifth Of Six Strategies In Mean Selection Time

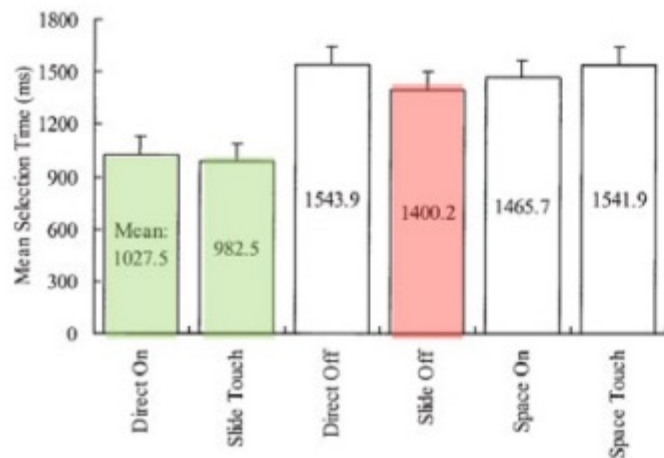


Fig. 5. Mean selection times (with standard error bars) for each individual strategy in Experiment One.

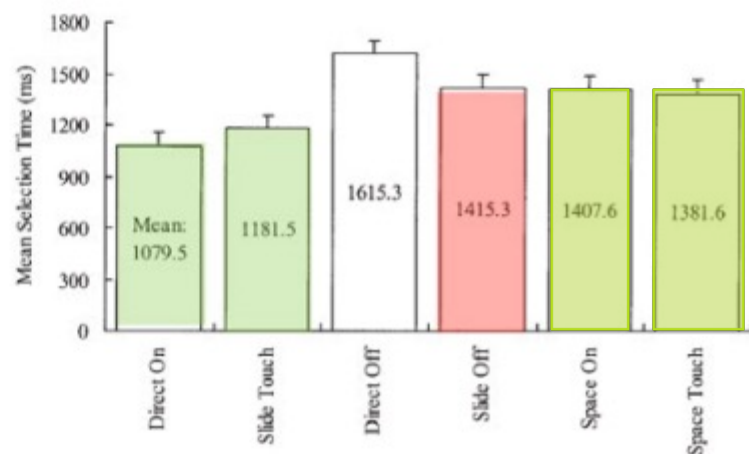


Fig. 11. Mean selection times for each strategy in Experiment Two.



# Ren's Two Experiments: Petition's Relied Upon Slide Off Was Third Of Six Strategies In Mean Error Rate

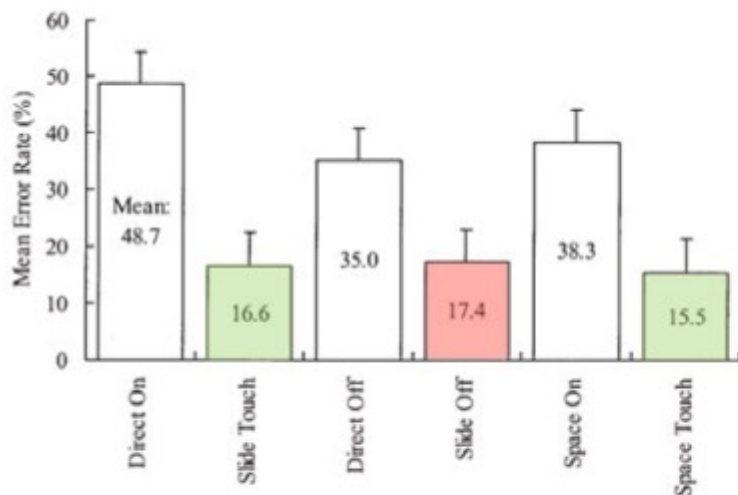


Fig. 6. Mean error rates for each individual strategy in Experiment One.

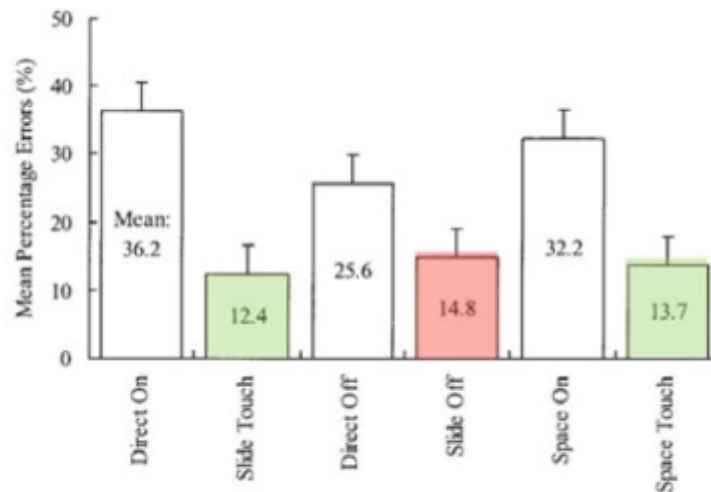


Fig. 12. Mean error rates for each strategy in Experiment Two.

# Petitioner's Allard Reference Also Directs A POSITA To "Slide Touch," Not Petition's Relied Upon "Slide Off"



## SECOND DECLARATION OF CRAIG ROSENBERG, PH.D.

100. Another reference relied upon by Petitioner (Allard) supports Ren's conclusion. Allard also uses the strategy referred by Ren as "Slide Touch." Specifically, in Allard, the button that is last touched by the user is the button that is selected when the user lifts the stylus off the screen, whether the stylus originally landed outside of the button on the screen or on the button itself. Ex. 1010 [Allard] 5:39-44. In fact, Allard explains that using the Slide-Touch strategy is preferred because "a user can easily recover from touching an unintended button by leaving a finger on the screen and sliding to another button or a non-button area." *Id.*, 5:45-54.

Ex. 2007 [Rosenberg-2nd-Decl.] ¶ 100

# Petitioner's Expert At Deposition And In His Publications Has Opined That A POSITA Would Generally Prefer A Tap Gesture

## DEPOSITION OF DR. BENJAMIN B. BEDERSON

2 relative term. That said, generally, I think the goal  
 3 was to design interfaces, so that they would be fast  
 4 and accurate. And tapping is easier to perform than  
 5 dragging as a physical, mechanical element.  
 6 And so if it could be designed to be  
 7 performed -- the mobile interface could be designed to  
 8 be used with tap or simpler interactions, then that  
 9 would have been something that would have been common  
 10 to start with.

Ex. 2005 [Bederson-1<sup>st</sup>-Depo] 56:2-10

## AppLens and LaunchTile: Two Designs for One-Handed Thumb Use on Small Devices

Neither the cursor nor gestures interfere with the most common stylus interactions of tap and tap+hold. Although gestures do overlap stylus drag commands, dragging is rarely used in handheld applications and could be distinguished from gestures by explicitly setting a gesture input mode.

Ex. 2006 [Bederson-Paper] 203

# Reply's New Motivation To Select Ren's "Slide Off" Strategy Is Untimely And Incorrect

## PETITIONERS' REPLY

Looking to Ren, a POSA would have guidance as to which gesture to incorporate with Hirayama-307, and would have looked for the gesture most consistent with Hirayama-307's disclosure and goal of designating the position where the window 43 would be opened. Resp., 55-56; EX1006, 5:1-12, 7:7-15.



Does Not Explain *Why A POSITA Would Abandon Hirayama-307's* Fully Functioning System In Favor Of Ren



Does Not Explain *Why A POSITA Would Look To Selection Techniques* (Ren) To Implement A Drag-And-Drop

# Table Of Contents

1. Secondary Indicia
2. “gliding ... away” (All Claims)
3. “the representation of the function is not relocated or duplicated during the gliding” (All Claims)
- 4. “applications and files” (Claim 6)**
5. “a shell upon an operating system” (Claim 15)

# Claim 6 Requires Activation Displays “A List” Of “Available Applications And Files”

**Patent No.: US 8,095,879 B2**

1. A non-transitory computer readable medium storing a computer program with computer program code, which, when read by a mobile handheld computer unit, allows the computer to present a user interface for the mobile handheld computer unit, the user interface comprising:

a touch sensitive area in which a representation of a function is provided, wherein the representation consists of only one option for activating the function and wherein the function is activated by a multi-step operation comprising (i) an object touching the touch sensitive area at a location where the representation is provided and then (ii) the object gliding along the touch sensitive area away from the touched location, wherein the representation of the function is not relocated or duplicated during the gliding.

6. The computer readable medium of claim 1, wherein the function, when activated, causes the user interface to display a list with a library of available applications and files on the mobile handheld computer unit.



# The Petition Relies On Allard's Tool Icon For The Disclosure Of "A List" With "Available Applications And Files"

## PETITION

EX1006, FIG. 3A (annotated). It would have been obvious to implement the tools icon functionality that displays a list with a library of available applications and files on the mobile handheld computer unit as disclosed in Allard, in the interface disclosed by Hirayama307 so as to provide a user information about the tools and applications available on the device, as taught by Allard, and also suggested, for example, by Hirayama307. It would have been within a POSA's skill to do so with

Pet., 73

## Even If Combined, Allard Does Not Disclose Claim 6 Because Its Tool Icon Presents A List Of Applications, Not “Applications And Files”

### Allard et al.

When TOOLS button 116 of screen 108 is selected, the Navigator then paints a Tools screen 124, where arrow 126 represents switching from Phone screen 108 to Tools screen 124. Tools screen 124 displays a plurality of selectable buttons 128 that allow-a user to select an application from a menu of different applications such as an address book, a calculator, a FAX, E-mail, data base services, and a note pad. When the FAX button is selected, the Navigator switches to the Fax application via arrow 129, and a FAX screen 130 is painted on display 38.

Ex. 1010 [Allard] 6:8-17

# Untimely Reply Argument Relies On Allard's Fax Files Under Its Fax Screen

## Allard et al.

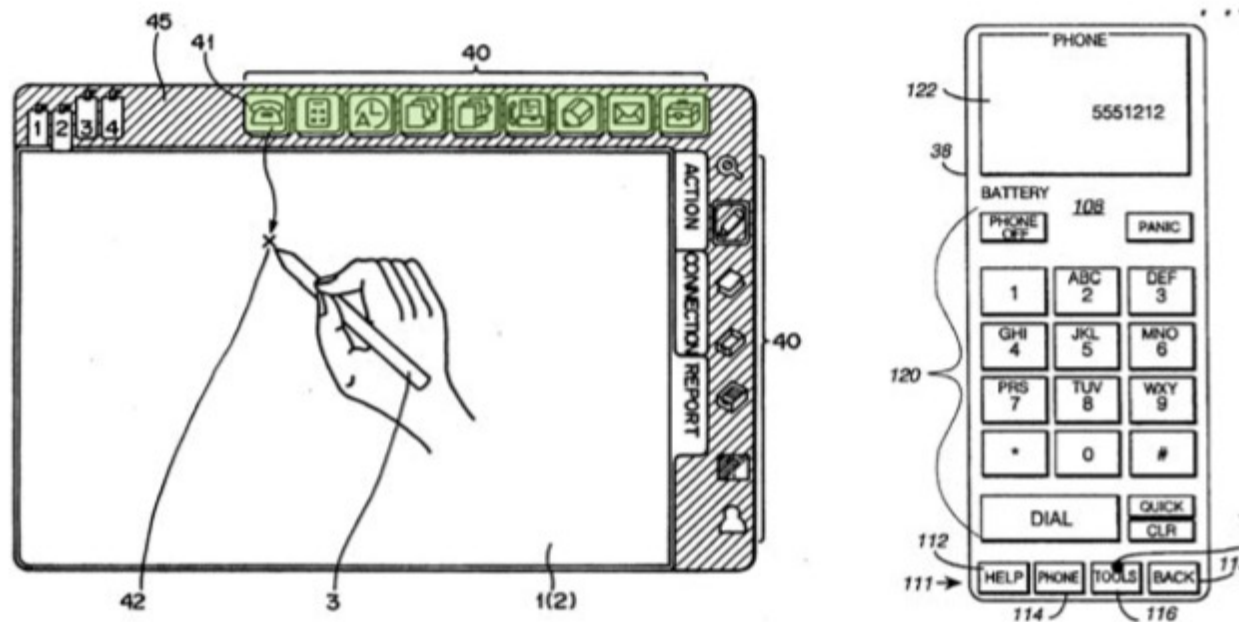
When the FAX button is selected, the Navigator switches to the Fax application via arrow 129, and a FAX screen 130 is painted on display 38.

FAX screen 130 displays a plurality of selectable buttons 132 that form a list of different fax files stored in the system.

Ex. 1010 [Allard] 6:8-18

A “fax screen” with a file list, and a “tools screen” with A list of applications, are not “a list” with “available applications and files”

# The Petition Fails To Provide Any Reason To Modify Hirayama-307 In View Of Allard To Disclose A List Of Applications



**Hirayama-307 (left) is much larger than Allard's small mobile device (right) that requires a list**

# How Would A User Open And Close Hirayama-307's Applications If Icons Are In A List Instead Of In The Hatched Area?

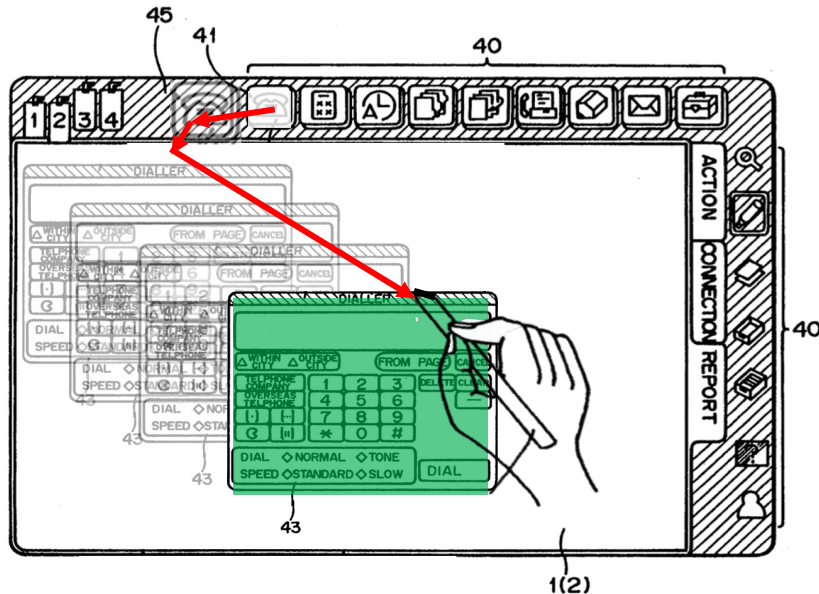
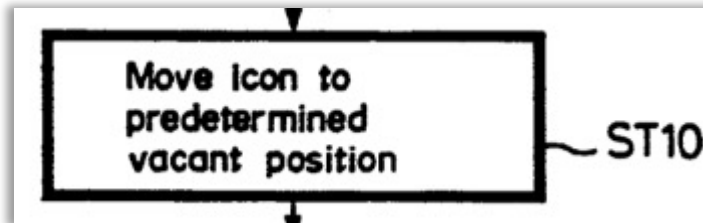
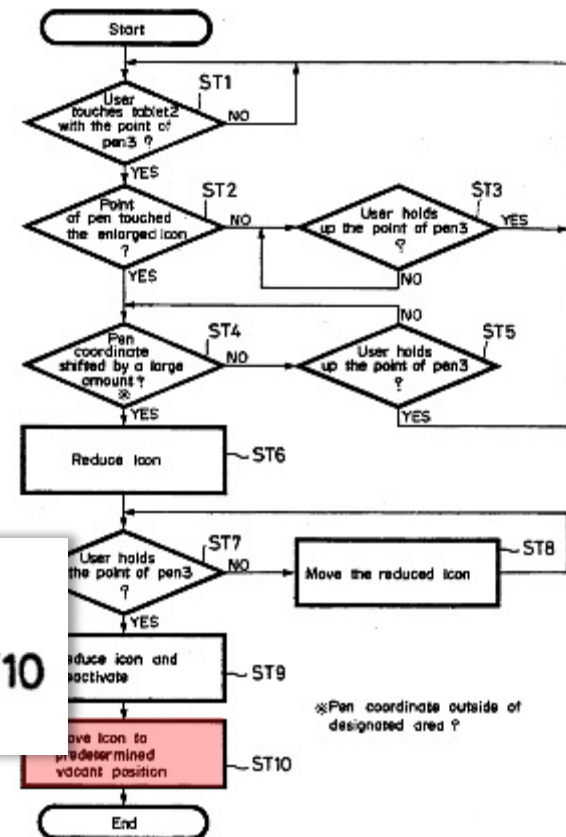


FIG. 4B



# Table Of Contents

1. Secondary Indicia
2. “gliding ... away” (All Claims)
3. “the representation of the function is not relocated or duplicated during the gliding” (All Claims)
4. “applications and files” (Claim 6)
5. **“a shell upon an operating system” (Claim 15)**



# Claim 15 Requires That Claim 1's Computer Program Code Function "As A Shell Upon An Operating System"

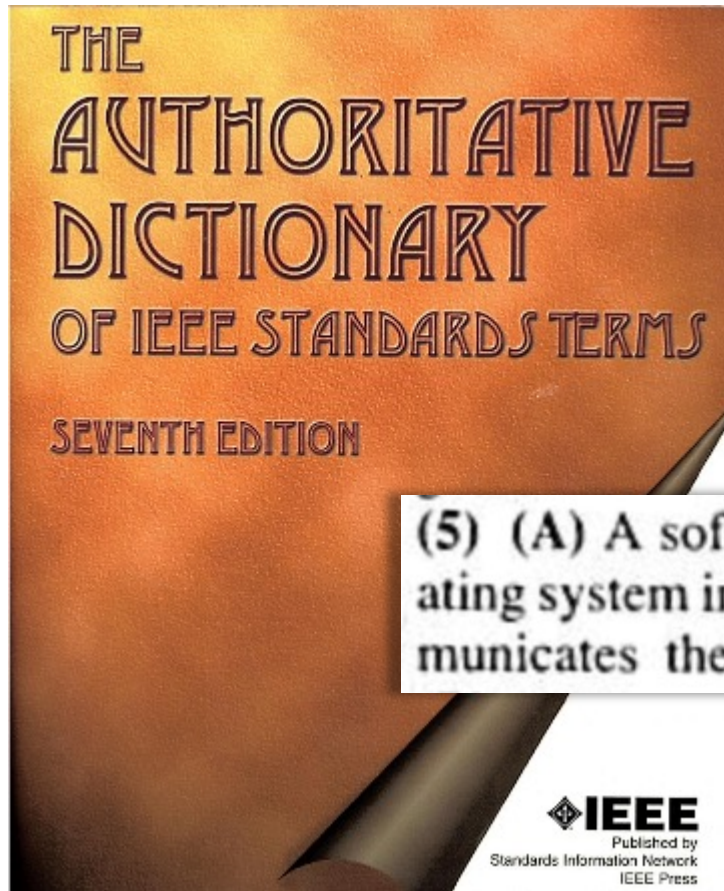
**Patent No.: US 8,095,879 B2**

1. A non-transitory computer readable medium storing a computer program with computer program code, which, when read by a mobile handheld computer unit, allows the computer to present a user interface for the mobile handheld computer unit, the user interface comprising:

a touch sensitive area in which a representation of a function is provided, wherein the representation consists of only one option for activating the function and wherein the function is activated by a multi-step operation comprising (i) an object touching the touch sensitive area at a location where the representation is provided and then (ii) the object gliding along the touch sensitive area away from the touched location, wherein the representation of the function is not relocated or duplicated during the gliding.

**15.** The computer readable medium of claim 1, characterised in, that said computer program code is adapted to function as a shell upon an operating system.

# User Interface For Gliding Activation Must Be An Interface Between User And OS (*i.e.*, An Add-on To The OS), Instead Of A Part Of The OS



**UNDISPUTED**

shell

(5) (A) A software interface between the user and the operating system in which the shell interprets commands and communicates them to the operating system of the computer.

Ex. 2038 [IEEE Dictionary] 1039

# Petition First Asserts That Hirayama-307 Inherently Discloses “Shell”

## PETITION

portion 1 as shown in FIG. 3B.” EX1006, 5:3-12; FIG. 3B. A POSA would have recognized the user interface with icons for opening windows for, for example, the dialler function, is implemented in computer program code adapted to function as a shell upon the operating system of the portable computer. Moreover, this claim would have been obvious over Hirayama307 and POSA knowledge of well-known systems to implement similar user interfaces as a shell upon an operating system (e.g., Windows CE based and other handheld devices). EX1002, ¶¶170-71.

Pet., 67

# Petitioner Provides No Analysis Why Hirayama-307's Custom Device Would "Necessarily" Be Implemented As A Shell



"A party must [] meet **a high standard in order to rely on inherency** ... the limitation at issue **necessarily must be present**, or the natural result of the combination ... Inherency, however, **may not be established by probabilities or possibilities**. The mere fact that a certain thing may result from a given set of circumstances is not sufficient."

*PAR Pharm. v. TWi Pharms., Inc.*,  
773 F.3d 1186, 1195-96 (Fed. Cir. 2014)  
(internal citations, quotations omitted)

# Petition Presents No Reason Why A POSITA Would Implement Hirayama-307's Custom System As A "Shell," Requiring More CPU, Memory, Programming Code

## PETITION

portion 1 as shown in FIG. 3B.” EX1006, 5:3-12; FIG. 3B. A POSA would have recognized the user interface with icons for opening windows for, for example, the dialler function, is implemented in computer program code adapted to function as a shell upon the operating system of the portable computer. Moreover, this claim would have been obvious over Hirayama307 and POSA knowledge of well-known systems to implement similar user interfaces as a shell upon an operating system (e.g., Windows CE based and other handheld devices). EX1002, ¶¶170-71.

Pet., 67



# Portions Of Petitioner's Second Expert Declaration Not Discussed In The Reply Should Be Disregarded

**~18,700-word Declaration Is 3.3x Reply Word Limit**

## **Ex. 1051 [Bederson-2<sup>nd</sup>-Decl.] ¶¶ Not Discussed In Reply:**

¶¶38-42, 47 55-56, 58-59, 69, 71-74, 90-94, 100, 103, 108-110, 120, 130, 132-133

## **Ex 1051 [Bederson-2<sup>nd</sup>-Decl.] ¶¶ Only Partially Discussed In Reply:**

¶¶112, 119, 122





# Reserve

# Cases Routinely Finds Similar Language To Establish Prosecution Disclaimer



- “**applicants rarely submit affirmative disclaimers** along the lines of ‘I hereby disclaim the following ...’ during prosecution and **need not do so** to meet the applicable standard.”

*Saffran v. Johnson & Johnson*, 712 F.3d 549, 559 (Fed. Cir. 2013)

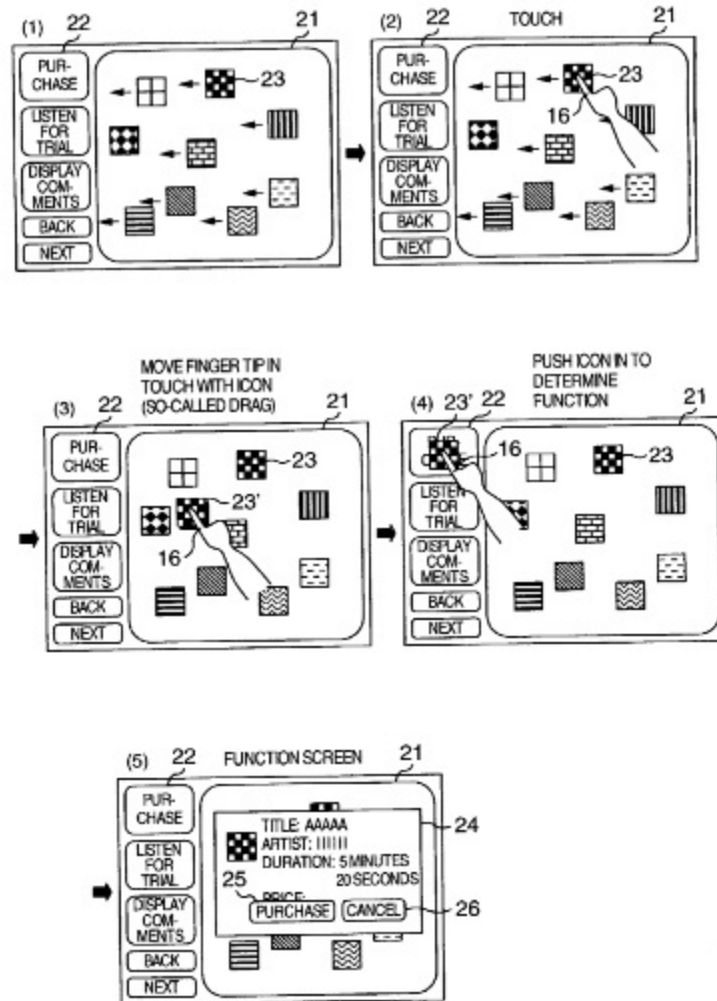


- “In light of **Applicant’s unequivocal statements** during prosecution, we determine that there is an express disclaimer . . . for issued claims 38 and 40.”

*Ford Motor Co. v. TMC Fuel Injection Sys., LLC*, IPR2014-00272, Paper 36, 19 (June 22, 2015)

*Ford Motor Co. v. Vehicle Operation Techs., LLC*, IPR2014-00594, Paper 26, 15-17 (Oct. 15, 2014) (similar)

## Ex. 2010 [Hoshino] Fig. 19



# Petitioner's Expert Cannot Explain His Earlier Inconsistent Opinions

## AppLens and LaunchTile: Two Designs for One-Handed Thumb Use on Small Devices

Neither the cursor nor gestures interfere with the most common stylus interactions of tap and tap+hold. Although gestures do overlap stylus drag commands, dragging is rarely used in handheld applications and could be distinguished from gestures by explicitly setting a gesture input mode.

Ex. 2006 [Bederson-Paper] 203

## DEPOSITION OF DR. BENJAMIN B. BEDERSON

1 Q And why does -- why did you say that,  
2 "dragging is rarely used in handheld applications"?  
3 A Counsel, I don't know exactly what I was  
4 thinking in this paper that I wrote almost 18 years  
5 ago. I think at the time I probably thought that  
6 dragging was used less frequently than tap, or tap and  
7 hold.

Ex. 2005 [Bederson-1<sup>st</sup>-Depo] 52:1-7

# Petitioner's Expert Has No Opinion On What A Swipe Gesture Means

DEPOSITION OF DR. BENJAMIN B. BEDERSON

3                   **Q. What would a POSITA understand a**  
4                   **swipe gesture to mean in the field of the 879**  
5                   **patent?**  
6                   MS. MILLER: Objection to form,  
7                   scope.  
8                   THE WITNESS: I don't recall  
9                   forming an opinion about the term "swipe" in my --  
10                  either of my reports. I don't have one sitting  
11                  here today and I don't recall that being a term  
12                  that's even used in the 879 patent, at least not  
13                  in the claims.

Ex. 2044 [Bederson-2<sup>nd</sup>-Depo.] 33:3-13

# Petitioner's Expert Has No Opinion On Whether A Swipe Gesture Is A Constituent Part Of Drag-And-Drop

DEPOSITION OF DR. BENJAMIN B. BEDERSON

2                   **Q. In your opinion is a swipe gesture**  
3                   **a constituent part of a drag-and-drop operation?**  
4                   MS. MILLER: Objection to form.  
5                   THE WITNESS: I don't believe I  
6                   analyzed or formed an opinion in either of my  
7                   reports about whether a swipe gesture is comprised  
8                   in a drag-and-drop operation. I don't have an  
9                   opinion about that sitting here today.

Ex. 2044 [Bederson-2<sup>nd</sup>-Depo.] 34:2-9



**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that the following documents were served  
by electronic service, by agreement between the parties, on the date below:

**PATENT OWNER'S DEMONSTRATIVE EXHIBITS  
(EXHIBIT 2046)**

The names and address of the parties being served are as follows:

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	axf-ptab@fr.com

Respectfully submitted,

/Vinson Lin/

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Date: August 31, 2022